ASG
Software Solutions

ASG-AutoChange™ User's Guide

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ASG Worldwide Headquarters Naples Florida USA | asg.com | info@asg.com
1333 Third Avenue South, Naples, Florida 34102 USA Tel: 941.435.2200 Fax: 941.263.3692 Toll Free: 800.932.5536 (USA only)

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Preface

This *ASG-AutoChange User's Guide* provides information about ASG-AutoChange, (herein called AutoChange), an ASG-Existing Systems Workbench (ESW) component that automates code conversion processes for a group of programs and copybooks. AutoChange enables you to modify the length, format, or value of data items in COBOL code, making it a useful tool for many types of conversions.

Allen Systems Group, Inc. (ASG) provides professional support to resolve any questions or concerns regarding the installation or use of any ASG product. Telephone technical support is available around the world, 24 hours a day, 7 days a week.

ASG welcomes your comments, as a preferred or prospective customer, on this publication or on any ASG product.

About this Publication

This publication consists of these chapters:

- Chapter 1, "Overview," introduces the AutoChange product.
- Chapter 2, "Understanding AutoChange," describes the major steps in implementing a successful conversion project.
- Chapter 3, "Concepts," outlines AutoChange strategies.
- Chapter 4, "Getting Started," explains online help, how to initiate AutoChange, and how to verify or modify user options.
- Chapter 5, "Applying Conversion Strategies," describes how to apply conversion strategies after they have been assigned.
- Chapter 6, "Creating a Conversion Set," explains how to create a conversion set.
- Chapter 7, "Accessing Conversion Tasks," describes how to set up and use Task Manager to access conversion tasks.
- Chapter 8, "Staging Source Code," describes how to stage source code from the Conversion Set screen.

- Chapter 9, "Analyzing Conversion Set Programs," describes how to analyze the conversion set programs.
- Chapter 10, "Planning Conversion Strategies," describes how to modify data item formats using AutoChange strategies and Inline strategies.
- Chapter 11, "Understanding and Creating Strategies," explains how to access and use the Plan Strategies screen.
- Chapter 12, "Creating Bridge Definitions for Bridge," describes how to maneuver through the Records to Bridge view screen.
- Chapter 13, "Promoting Converted Programs and Copybooks," explains how to promote converted programs and copybooks, and how to restore them to their original location.
- Chapter 14, "AutoChange Reports," describes the two reports that show conversion set status and impacted data item information.

Related Publications

The documentation library for ASG-AutoChange consists of these publications (where *nn* represents the product version number):

- *ASG-AutoChange Installation Guide* (CCX0300-*nn*) includes installation and maintenance procedures for ASG-AutoChange.
- *ASG-AutoChange User's Guide* (CCX0200-*nn*) provides detailed information on the product and its usages.
- *ASG-Center Installation Guide* (CNX0300-*nn*) includes installation and customization procedures for ASG-Center, the common platform for ASG-ESW components.
- *ASG-ESW Enhancement Summary* (ESW1000-*nn*) highlights the new functionality for this release.

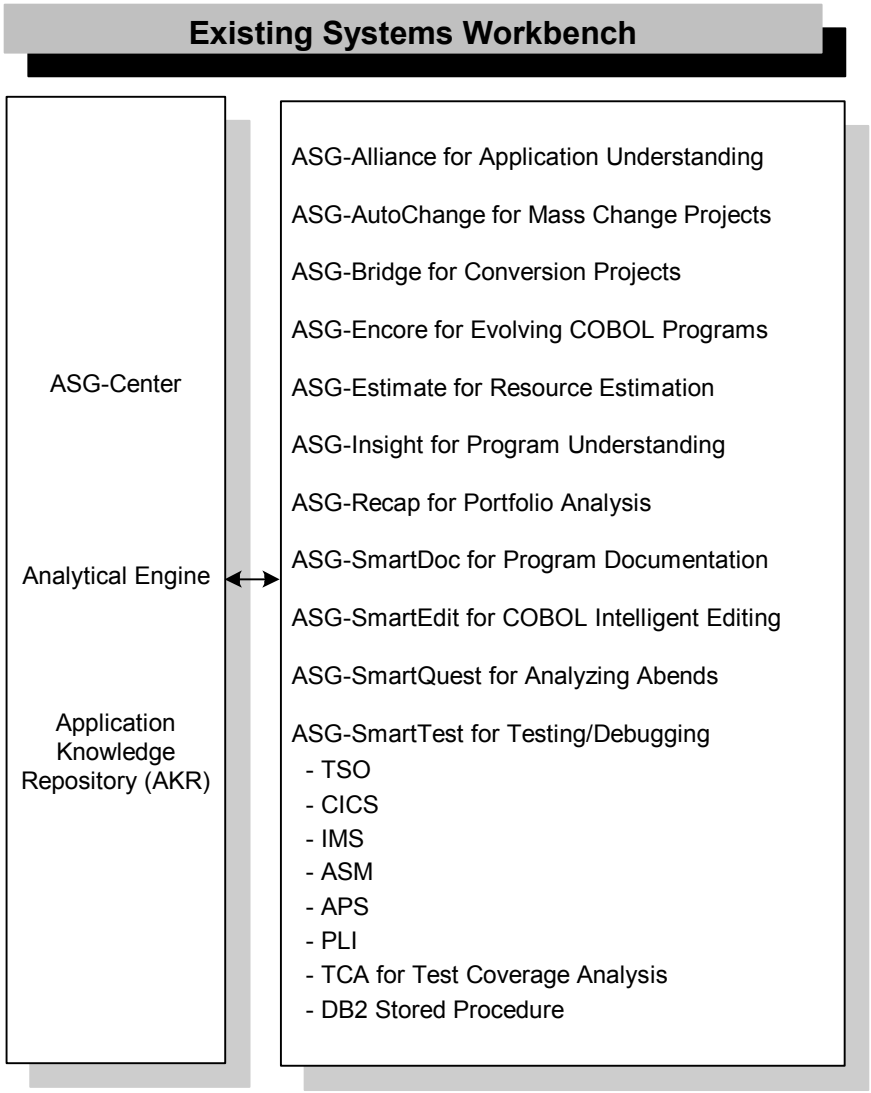
Note:

To obtain a specific version of a publication, contact ASG Customer Support.

ASG-Existing Systems Workbench (ASG-ESW)

ASG-ESW (herein called ESW) is an integrated suite of components designed to assist organizations in enhancing, redeveloping, or re-engineering their existing systems. ESW products use the Application Knowledge Repository (AKR) to store source program analysis information generated by the Analytical Engine. Figure 1 represents the components of ESW.

Figure 1 • ASG Existing Systems Workbench



This table contains the name and description of each ESW component:

ESW Product	Herein Called	Description
ASG-Alliance	Alliance	The application understanding component that is used by IT professionals to conduct an analysis of every application in their environment. Alliance supports the analysis and assessment of the impact of change requests upon an entire application. Alliance allows the programmer/ analyst to accurately perform application analysis tasks in a fraction of the time it would take to perform these tasks without an automated analysis tool. The impact analysis from Alliance provides application management with additional information for use in determining the resources required for application changes.
ASG-AutoChange	AutoChange	The COBOL code change tool that makes conversion teams more productive by enabling quick and safe changes to be made to large quantities of code. AutoChange is an interactive tool that guides the user through the process of making source code changes.
ASG-Bridge	Bridge	The bridging product that enables field expansion for program source code, without being required to simultaneously expand the fields in files or databases. Because programs are converted in smaller groups, or on a one-by-one basis, and do not require file conversion, testing during the conversion process is simpler and more thorough.
ASG-Center	Center	The common platform for all ESW products. Center provides the common Analytical Engine to analyze the source program and store this information in the AKR. This common platform provides a homogeneous environment for all ESW products to work synergistically.

ESW Product	Herein Called	Description
ASG-Encore	Encore	The program re-engineering component for COBOL programs. Encore includes analysis facilities and allows you to extract code based on the most frequently used re-engineering criteria. The code generation facilities allow you to use the results of the extract to generate a standalone program, a callable module, a complement module, and a CICS server. Prior to code generation, you can view and modify the extracted Logic Segment using the COBOL editor.
ASG-Estimate	Estimate	The resource estimation tool that enables the user to define the scope, determine the impact, and estimate the cost of code conversion for COBOL, Assembler, and PL/I programs. Estimate locates selected data items across an application and determines how they are used (moves, arithmetic operations, and compares). Time and cost factors are applied to these counts, generating cost and personnel resource estimates.
ASG-Insight	Insight	The program understanding component for COBOL programs. Insight allows programmers to expose program structure, identify data flow, find program anomalies, and trace logic paths. It also has automated procedures to assist in debugging program abends, changing a computation, and resolving incorrect program output values.
ASG-Recap	Recap	The portfolio analysis component that evaluates COBOL applications. Recap reports provide function point analysis and metrics information, program quality assessments, intra-application and inter-application comparisons and summaries, and historical reporting of function point and metrics information. The portfolio analysis information can also be viewed interactively or exported to a database, spreadsheet, or graphics package.
ASG-SmartDoc	SmartDoc	The program documentation component for COBOL programs. SmartDoc reports contain control and data flow information, an annotated source listing, structure charts, program summary reports, exception reports for program anomalies, and software metrics.

ESW Product	Herein Called	Description
ASG-SmartEdit	SmartEdit	The COBOL editing component that can be activated automatically when the ISPF/PDF Editor is invoked. SmartEdit provides comprehensive searching, inline copybook display, and syntax checking. SmartEdit allows you to include an additional preprocessor (for example, the APS generator) during syntax checking. SmartEdit supports all versions of IBM COBOL, CICS, SQL, and CA-IDMS.
ASG-SmartQuest	SmartQuest	The diagnostic tool for analyzing batch and CICS transaction abends. SmartQuest has been designed to make the maximum use of simple point-and-shoot techniques to enable fast and easy navigation through any data dump.
ASG-SmartTest	SmartTest	The testing/debugging component for COBOL, PL/I, Assembler, and APS programs in the TSO, MVS Batch, CICS (including file services), and IMS environments. SmartTest features include program analysis commands, execution control, intelligent breakpoints, test coverage, pseudo code with COBOL source update, batch connect, disassembled object code support, and full screen memory display.

Invoking ESW Products

The method you use to invoke an ESW product depends on your system setup. If you need assistance to activate a product, see your systems administrator. If your site starts a product directly, use the ISPF selection or CLIST as indicated by your systems administrator. If your site uses the ESW screen to start a product, initiate the ESW screen using the ISPF selection or CLIST as indicated by your systems administrator and then typing in the product command on the command line.

The product names can also vary depending on whether you access a product directly or through ESW. See "ESW Product Integration" on page xiii for more information about using ESW.

To initialize ESW products from the main ESW screen, select the appropriate option on the action bar pull-downs or type the product shortcut on the command line.

Product Name (ESW Name)	Shortcut	ESW Pull-down Options
Alliance (Application Understanding)	AL	Understand ▸ Application
AutoChange (Conversion Set)	CC	Change ▸ Conversion Set
Bridge	BR	Change ▸ ASG-Bridge
Encore (Program Re-engineering)	EN	Re-engineer ▸ Program
Estimate	ES	Measure ▸ ASG-Estimate
Insight (Program Understanding)	IN	Understand ▸ Program
Recap (Portfolio Analysis)	RC	Measure ▸ Portfolio
SmartDoc (Program Documentation)	DC	Document ▸ Program
SmartEdit	SE	Change ▸ Program **Or** Change ▸ Program with Options
SmartQuest	SQV	Understand ▸ Abend/Dump
SmartTest (Testing/Debugging)	ST	Test ▸ Module/Transaction

ESW Product Integration

Because ESW is an integrated suite of products, you are able to access individual ESW products directly, or through the main ESW screen. As a result, different fields, values, action bar options, and pull-down options display on a screen or pop-up depending on how you accessed the screen or pop-up.

Certain ESW products also contain functionality that interfaces with other ESW products. Using SmartTest as an example, if Alliance is installed, SmartTest provides a dynamic link to Alliance that can be used to display program analysis information. If Insight is installed and specified during the analyze, the Insight program analysis functions are automatically available for viewing logic/data relationships and execution path. For example, the Scratchpad option is available on the Options pull-down if you have Insight installed.

Access to these integrated products requires only that they be installed and executed in the same libraries.

Example 1

Figure 2 shows the Encore Primary screen that displays when you access Encore directly.

The Encore Primary screen contains these eight action bar menu items: File, View, Extract, Generate, Search, List, Options, and Help.

Figure 2 • Encore Primary Screen

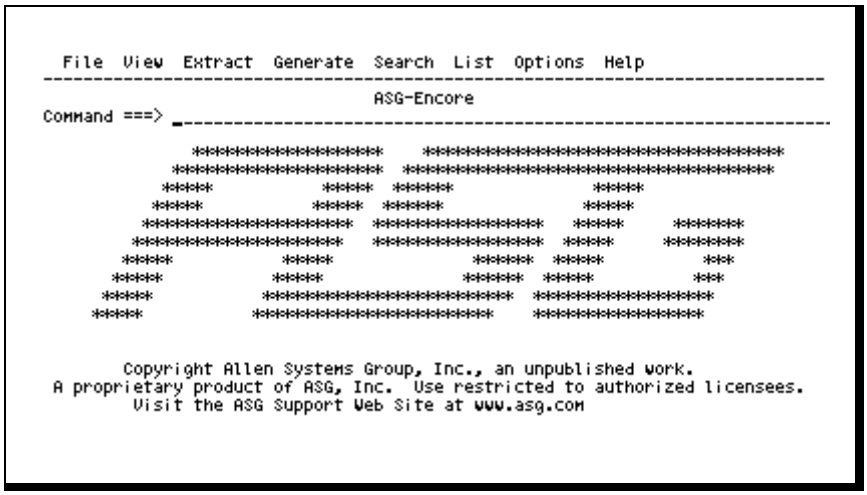
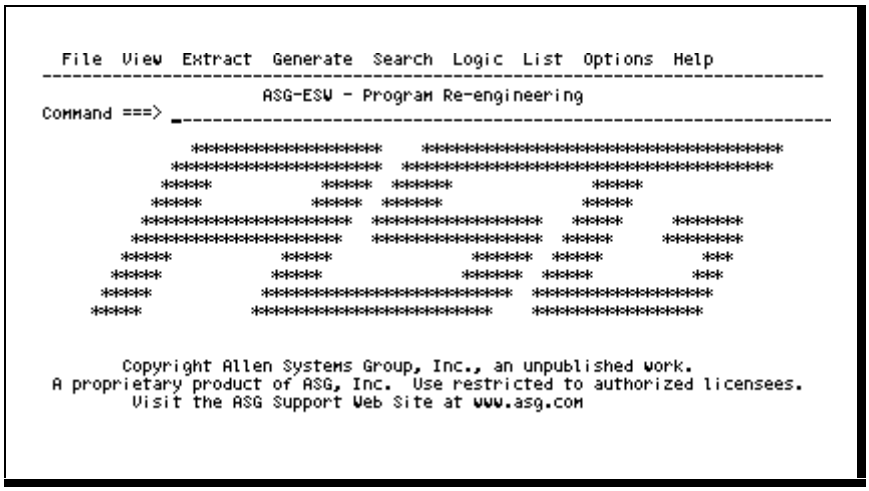


Figure 3 shows the Encore Primary screen that displays when you access Encore through ESW by selecting Re-engineer ▸ Program from the ESW action bar menu. Notice that the Primary screen name changes to ASG-ESW - Program Re-engineering when you enter Encore through ESW. Also, the Logic menu item displays if Insight is installed.

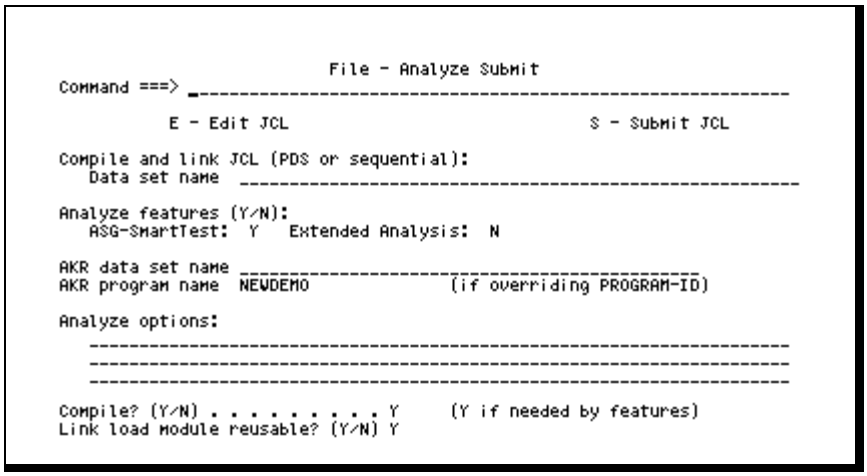
Figure 3 • ESW Encore Primary Screen



Example 2

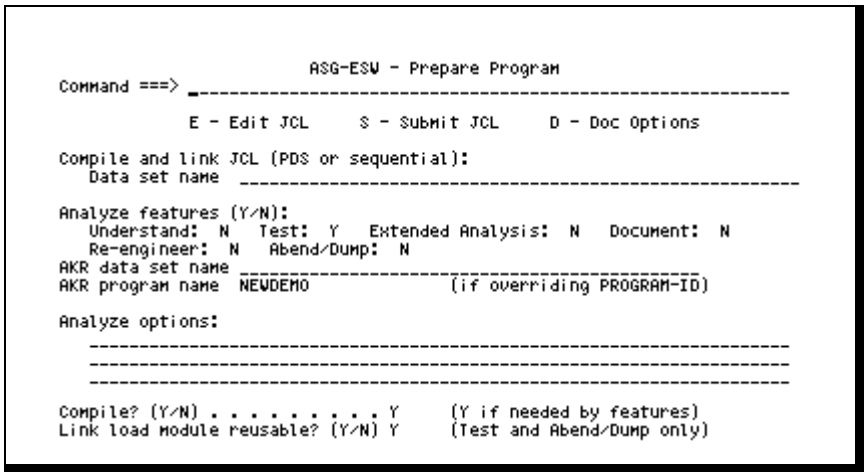
Figure 4 shows the File - Analyze Submit pop-up that displays when you access SmartTest directly. Figure 5 on page xvi shows the File - Analyze Submit pop-up that displays when you access SmartTest through ESW.

Figure 4 • File - Analyze Submit Screen



The actions shown on these screens can also vary. For example, the D - Doc Options action is only available on the File Prepare Program screen (or File - Analyze Submit screen) if SmartDoc is installed on your system. In Figure 4 on page xv, the Doc Options action is not displayed.

Figure 5 • ASG-ESW - Prepare Program Screen (accessed through ESW)



Notice that the Analyze features field in Figure 5 lists additional ESW products than shown on Figure 4 on page xv. This field is automatically customized to contain the ESW products you have installed on your system. These are the names of the analyze types:

Analyze Type	Analyze Type (ESW)
ASG-Encore	Re-engineer
ASG-Insight	Understand
ASG-SmartDoc	Document
ASG-SmartQuest	Abend/Dump
ASG-SmartTest	Test
Extended Analysis (ASG-SmartTest with Insight installed)	Extended Analysis

Publication Conventions

ASG uses these conventions in technical publications:

Convention	Represents
ALL CAPITALS	Directory, path, file, dataset, member, database, program, command, and parameter names.
Initial Capitals on Each Word	Window, field, field group, check box, button, panel (or screen), option names, and names of keys. A plus sign (+) is inserted for key combinations (e.g., Alt+Tab).
`lowercase italic monospace`	Information that you provide according to your particular situation. For example, you would replace *`filename`* with the actual name of the file.
`Monospace`	Characters you must type exactly as they are shown. Code, JCL, file listings, or command/statement syntax. Also used for denoting brief examples in a paragraph.
Vertical Separator Bar (|) with underline	Options available with the default value underlined (e.g., Y|N).
Underline	Denotes a cursor-selectable field or line.

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ASG provides support throughout the world to resolve questions or problems regarding installation, operation, or use of our products. We provide all levels of support during normal business hours and emergency support during non-business hours.

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Online product support is available at: http://www.asg.com/support/support.asp via the ASG Intelligent Support Portal (ISP). Your logon information for ISP online support is:

Customer ID = *NNNNNNNNN*
Password = *XXXXXXXXXX*

where:

NNNNNNNNN is your customer ID supplied by ASG Product Distribution.
XXXXXXXXXX is your unique password supplied by ASG Product Distribution.

The *ASG-Intelligent Support Portal User's Guide* provides instructions on how to use the ISP and is located on the ASG Support web page.

Telephone Support

To expedite response time, please have this information ready:

- Product name, version number, and release number
- List of any fixes currently applied
- Any alphanumeric error codes or messages written precisely as displayed
- A description of the specific steps that immediately preceded the problem
- Verify whether you received an ASG Service Pack or cumulative service tape for this product. It may include information to help you resolve questions regarding installation of this ASG product. The Service Pack instructions are in a text file on the distribution media included with the Service Pack. You can access the latest software corrections and Service Packs via the ISP.
- The severity code (ASG Customer Support uses an escalated severity system to prioritize service to our clients. The severity codes and their meanings are listed below.)

Severity Codes and Expected Support Response Times

Severity	Meaning	Expected Support Response Time
1	Production down, critical situation	Within 30 minutes
2	Major component of product disabled	Within 2 hours
3	Problem with the product, but customer has work-around solution	Within 4 hours
4	"How-to" questions and enhancement requests	Within 4 hours

The Americas

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South Africa	800.201.423		support.sa@asg.com

Asia Pacific (APAC)

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If you receive a voice mail message, follow the instructions to report a production-down or critical problem. Leave a detailed message including your name and phone number. An ASG Customer Support representative will be paged and will return your call as soon as possible. Please have available the information described previously when the ASG Customer Support representative contacts you.

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Submit all product and documentation suggestions to ASG's product management team at http://www.asg.com/asp/emailproductsuggestions.asp.

If you do not have access to the web, FAX your suggestions to product management at (239) 263-3692. Please include your name, company, work phone, e-mail ID, and the name of the ASG product you are using. For documentation suggestions include the publication number located on the publication's front cover.

1 Overview

This chapter introduces the AutoChange product and contains these sections:

AutoChange Overview

AutoChange is an ESW component that imports application definition information and impact analysis results from Estimate or Alliance, and automates the conversion setup process for a group of programs and copybooks. AutoChange, dynamically linked to Insight and SmartEdit, streamlines the program conversion process. AutoChange is a product designed to assist, control, and monitor the program conversion process.

You can import program and copybook information (including an impacted data item list) into a conversion set from Estimate or Alliance. AutoChange creates a set of staging libraries to store the original source code and code backup. AutoChange also creates an AKR to contain the impacted data item list and Insight analysis information.

AutoChange links to Insight where you can assign a conversion strategy to each impacted data item. You can propagate a strategy to related data items in a copybook or a program. AutoChange detects, flags, and explains conflicts among strategies assigned to data items that exchange values so you can resolve any conflicts that require compatible conversion strategies.

After AutoChange assigns compatible conversion strategies to all impacted data items in a program or in copybooks, it links to SmartEdit where conversion strategies are applied. AutoChange promotes the conversion set to your specified libraries after you apply strategies to all programs and copybooks.

Benefits of AutoChange

These are the benefits of using AutoChange for program conversion projects:

- Increases conversion staff productivity and speed. AutoChange allows programmers to implement code changes quickly through a few simple commands, and detects any conflicts among strategies assigned to data items so they can be resolved immediately.
- Manages the code change process. Easy-to-use ISPF screens guide the conversion team through each step.
- Implements multiple conversion strategies. You can reformat fields with program code and implement windowing techniques using Bridge.

Understanding Conversion Approaches

These are the two main conversion approaches for modifying data item fields using AutoChange:

	AutoChange	Inline Strategy
Objective	Permanently change the field definition in code by altering the size or the description of a data item.	Temporarily alter the field length, format, or value of a data item where it is used in program processing.
Changes	The field definition PICTURE and USAGE clauses in the COBOL Data Division.	Current code in the Procedure Division; comments it out and replaces it with new user-defined code segments.

	AutoChange	Inline Strategy
User impacts	Automatically makes required changes to reformatted fields. You must already have data compatible with converted code, or use an option such as bridging to provide compatible data for use with the code.	Enables use of bridging techniques within the new code segments, if necessary.
Examples for use	You want to expand fields within your program permanently and the data for the fields is also converted (or bridged) for the new field size.	You do not want to alter your data definitions permanently, but have these requirements: You want to add user-defined processing when certain fields are used in calculations or in DISPLAY statements. You need to handle four-digit year calculations correctly within the code.

Using the Bridge bridging capabilities enables programs using reformatted data items to use unconverted data, allowing you to defer file conversion indefinitely. Linking to a Bridge Rule allows the converted field to receive data in the changed format. See the *ASG-Bridge User's Guide* for more information.

Note:

You must send conversion information to Bridge and define a routine within Bridge before the converted program can receive compatible data. You do not have to link to a Bridge Rule if database data is already compatible.

When to Use AutoChange

Use the base AutoChange product if your code conversion requires these actions:

- Expanding data item, such as date fields, to the left or the right
- Increasing or decreasing the size of a field in bytes
- Changing some data items while leaving other data items unchanged
- Flagging data items for future action
- Assigning bridging strategies to converted fields

2 Understanding AutoChange

This chapter describes how to implement a successful conversion project and contains these sections:

AutoChange provides you with easy-to-use ISPF screens and pop-ups used to control and monitor the conversion process. Be sure to perform the conversion tasks for each program and copybook in sequence, as one task may be dependent on the performance of a prior task. If you perform a task out of sequence, an `Action Denied` message displays.

AutoChange Implementation Steps

To implement a successful conversion project with AutoChange

1. Create a conversion set that consists of an AKR for storing impacted data item and analysis information.

2. Create a set of staging libraries for storing the original source code and corresponding copybooks to be converted. Use the Task Manager or the Conversion Set screen to access the remaining conversion tasks. See "Creating a Conversion Set" on page 27 and "Accessing Conversion Tasks" on page 37.

3. Stage or copy the original source code to the staging and back-up libraries. See "Staging Source Code" on page 53.

4 Analyze the programs in the conversion set to identify the logic flow and relationships among program data items. You may analyze all of the programs in a conversion at the same time (mass analysis), but consider your system resources. See "Analyzing Conversion Set Programs" on page 55.

5 Import the appropriate conversion strategies starter sets AutoChange provides, or create your own. See "Importing AutoChange Starter Set Strategies" on page 18 and "Understanding and Creating Strategies" on page 95.

6 Assign conversion strategies to all data items in the programs and copybooks contained in the conversion set. Check for strategy conflicts among data items and resolve those conflicts that require compatible conversion strategies. See "Planning Conversion Strategies" on page 57.

7 Apply the assigned conversion strategies to the source code in the staging libraries. If you need to reassign conversion strategies, AutoChange has a rollback feature that copies the original source code back into the staging libraries from the backup libraries. See "Applying Conversion Strategies" on page 21.

8 Promote the conversion strategies applied to the source code in the staging libraries to the original source code libraries or to a user-specified target library. See "Promoting Converted Programs and Copybooks" on page 125.

Environment Implications for Conversion Sets

This table shows how the steps in the process apply to the conversion data used in different environments:

Data type	Notes
Copybooks	The plan action is not valid for copybooks. Planning for copybooks is performed when the program that uses the copybook is planned.
IDMS records	IDMS records are part of the data dictionary and do not need to be staged. The data items in IDMS records are planned when IDMS programs containing COPY IDMS RECORD statements are planned.
Programs	All phases of the conversion process apply to programs, although the result of an Apply action differs for IDMS programs.
IDMS programs	The Apply action for IDMS programs creates a report of required updates that are then made by a database administrator.

3 Concepts

This chapter describes AutoChange strategy concepts and contains these sections:

AutoChange automates the conversion setup for a group of programs and copybooks, and imports application definition information and impact analysis results from Estimate and Alliance.

The Task Manager facility sequences the conversion tasks after you create a conversion set and guides you through the process.

Creating the Conversion Set

A conversion set is a group of components created to convert selected programs and copybooks. These are the components:

Component	Description
Impacted Data Item List and Application Definition	Impacted data items imported from an Estimate or an Alliance impact analysis.
AKR	Within the main administrative AKR for AutoChange, an AKR dataset for each conversion set stores the impacted data item list and program analysis information.

Staging Libraries

AutoChange allocates a set of staging and backup libraries and copies the source code into these libraries (if this was not done during the conversion set creation phase). Staging libraries contain copies of original source programs and copybooks selected for conversion. AutoChange applies the conversion to members in the staging libraries. Also, AutoChange creates backup libraries so you can reverse changes.

Analyzing the Programs

AutoChange analyzes programs in the conversion set and identifies program logic flow and relationships between data items. You can perform a mass analysis of all programs in the conversion set.

Using Conversion Strategies

Creating Conversion Strategies

A conversion strategy defines how AutoChange modifies the length of an impacted data item. You can create AutoChange and Inline strategies to specify how to format the data items. AutoChange provides a starter set of conversion strategies that you can import and use.

Assigning Conversion Strategies

AutoChange assigns a conversion strategy to every data item in the impacted data item list that was imported from Estimate or Alliance. After the program is analyzed, AutoChange dynamically links to Insight where conversion strategies are assigned.

Applying Conversion Strategies

After strategies have been assigned to all of the impacted data items in the conversion set, AutoChange invokes SmartEdit, which applies the strategies to the source code in the staging libraries.

Promoting Converted Programs

AutoChange promotes the converted programs to the production or the testing environment libraries that you specify.

Using the Bridge Interface

AutoChange assigns the Bridge Rules from Bridge as conversion strategies. You can create simple Bridge Definitions in AutoChange, then dynamically access Bridge to complete the definitions and generate the Bridge Routines. In addition, AutoChange inserts the Bridge initialization CALL into programs that contain Bridge Records.

See the *ASG-Bridge User's Guide* for more information about Bridge Rules, Records, and Routines.

Generating Reports

AutoChange generates reports showing the conversion set status and the conversion strategies assigned to impacted data items.

Using the Task Manager

The AutoChange Task Manager facility generates a sequential list of conversion tasks and updates the list as tasks are completed. You can access the screens and pop-ups associated with each task directly from the Task Manager.

To access the Task Manager

1. Select File ▸ Open Conversion Set from the AutoChange Primary screen and press Enter. The Open Conversion Set pop-up displays.

2. Type in the conversion set name and high-level qualifier, and press Enter. The Conversion Set screen displays.

3. Select View ▸ Task List and press Enter. The Task Manager screen displays.

4 Getting Started

This chapter explains online help, how to initiate AutoChange, how to verify or modify user options, and contains these sections:

Accessing Online Help

Context-sensitive online help describes all options and fields on every screen and pop-up in AutoChange. It also includes abend and AutoChange message information.

This is the format for help messages:

ASG*nnnnx* `text`

where:

nnnn is the message number

x is the severity level

`text` is the message text

These are the methods used to access Help:

Method	Description
Press PF1 Type `HELP` or a question mark (`?`) on the command line	Displays the current screen, pop-up, or message help.
Select Help from action bar	Displays Help pull-down listing help options.

These are the severity levels:

Level	Description
I	Informational: No action is required.
W	Warning: A non-critical error condition exists.
E	Error: A critical error condition exists.
D	Disaster: A serious error condition exists. Product cannot continue.
T	Termination: The product terminated with the specified error.

Online Help Navigation Commands

These commands assist in navigating the help system:

Command	Description
TOC	Displays the Table of Contents.
INDEX	Displays the help index. Type a letter on the command line of index screen, and press Enter to display the index for that letter.
BACK	Displays the previously displayed help screen.
Press Enter	Displays the next screen in a continuation series.
HELP ABENDS	Displays the Abends help screen, from which you can select list-related topics.
EXIT	Exits online help.

Starting AutoChange

To start AutoChange from ESW

1 Initiate the ESW according to your site procedures.

2 Select Change ▸ Conversion Set on the ESW Primary screen (see Figure 6).

Or

Type CC (the product abbreviation for AutoChange) on the command line.

3 Press Enter. The AutoChange Primary screen displays (see Figure 7).

Figure 6 • ESW Primary Screen - AutoChange Selection

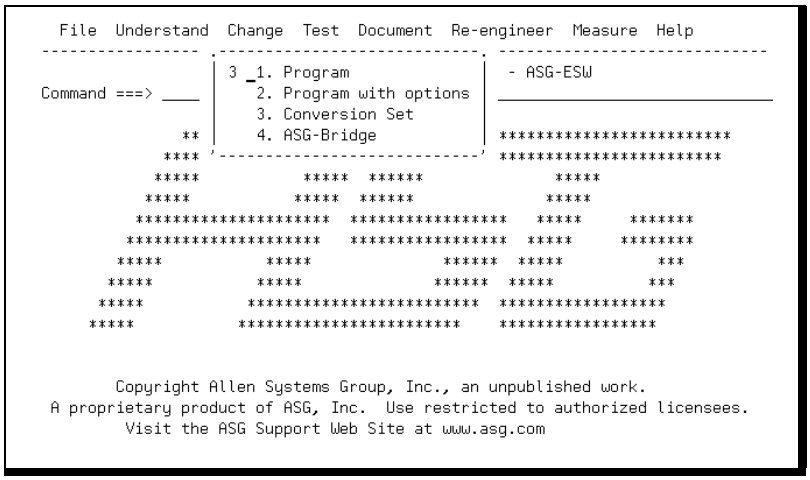
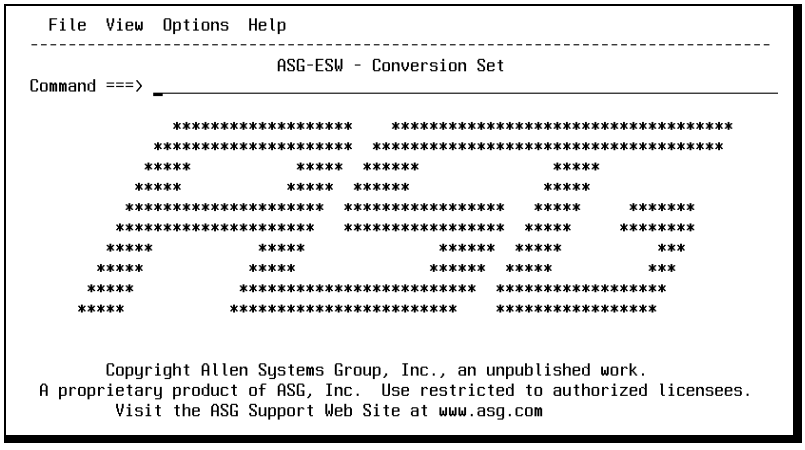


Figure 7 • ASG-AutoChange Primary Screen



Verifying User Options

At installation, AutoChange sets the operating environment options to default values. Verify these default options when you use AutoChange for the first time:

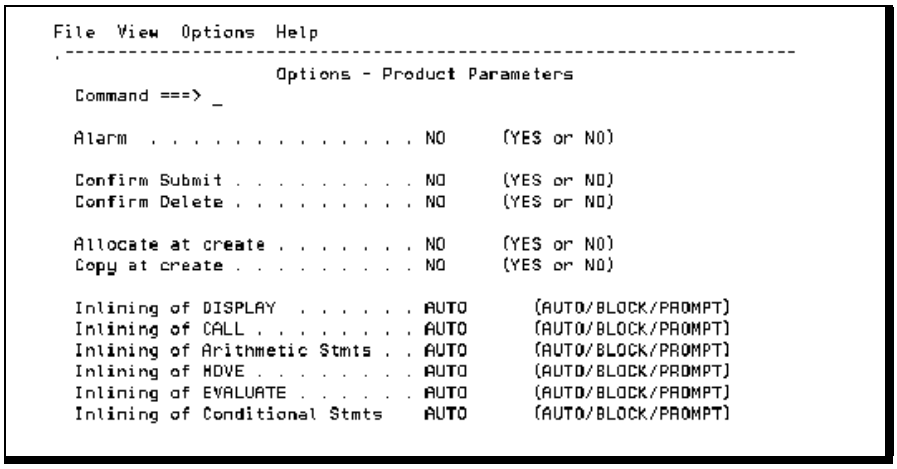
Default Option	Description
Product Parameters	Controls alarm settings, confirmation messages for submissions and deletions, automatic allocation of libraries, and automatic staging of libraries.
Product Allocations	Specifies DASD information for the Log and List files.
Log/List File Processing	Specifies process for log/list files.
PF Key Assignments	Specifies PF key assignments.

You can access the user options from the Options pull-down on most screens or pop-ups using the Options keyword on the action bar.

To verify or to change product parameters

1 Select Options ▸ Product Parameters from the AutoChange Primary screen and press Enter. The Options - Product Parameters pop-up displays (see Figure 8).

Figure 8 • Options - Product Parameters Pop-up



2 Verify or modify these product parameters:

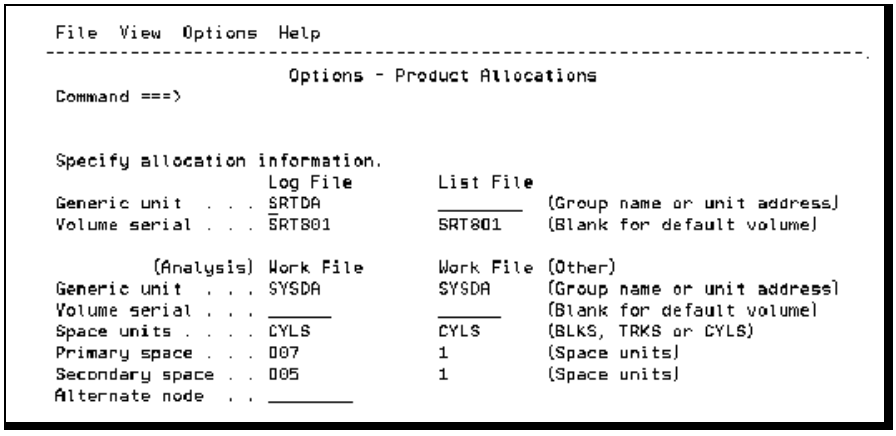
Parameter	Description
Alarm	Indicates whether you hear an audible alarm when an error occurs.
Confirm Submit	Indicates whether batch job submissions are confirmed.
Confirm Delete	Indicates whether confirmations appear prior to deletions.
Allocate at create	Indicates whether staging library allocation occurs at conversion set creation.
Copy at create	Indicates whether staging occurs at conversion set creation.
Inlining of: DISPLAY CALL Arithmetic Stmts MOVE EVALUATE Conditional Stmts	Specifies the inline handling option for the supported statement types. These are the valid values: AUTO — Automatically applies Inline strategies to statements when you perform an Apply action. If applicable, the logic is also automatically reverse converted. BLOCK — Nothing is applied to statements when you perform an Apply action. PROMPT — Displays the Specify Inline Handling screen listing the statements and lets you decide.

3 Press PF3 to save changes and exit.

To verify or to change product allocations

1 Select Options ▸ Product allocations from the AutoChange Primary screen and press Enter. The Options - Product Allocations pop-up displays (see Figure 9).

Figure 9 • Options - Product Allocations Pop-up



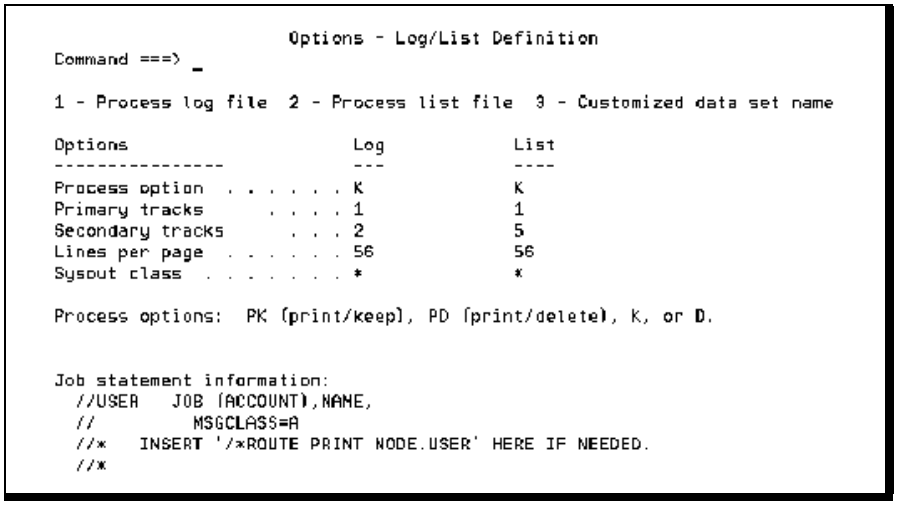
2 Verify or modify the allocation information.

3 Press PF3 to save changes and exit.

To verify or to change log and list options

1 Select Options ▸ Process log/list file from the AutoChange Primary screen and press Enter. The Options - Log/List Definition pop-up displays (see Figure 10).

Figure 10 • Options - Log/List Definition Pop-up



2 Verify or modify the information presented.

3 Press PF3 to save changes and exit.

The log file is only allocated if an internal error, such as an abend, occurs. It contains ESW error messages that aid the debugging process. The list file contains print output and is allocated when you issue a print request.

Customizing Log or List Dataset Names

To customize the dataset where the log or the list file will be allocated, follow this step:

- Specify the K or the PK process option on Options - Log/List Definition pop-up. By default, AutoChange allocates the log and list files as, for example:

  USERID.STT*nnnnn*.VIA*xxxxx*

  where:

  nnnnn is a sequential number from 00001 to 99999

  xxxxx is LOG for log and LIST for list files. If you specified a TSO prefix, the prefix appends to the beginning of the file name allocated for the log and list files.

To customize the log or the list dataset name

1 Select Options ▸ Process log/list file from the AutoChange Primary screen and press Enter. The Options - Log/List Definition pop-up displays.

2 Type 3 and press Enter to display the Options - Log/List Name Customization pop-up (see Figure 11).

Figure 11 • Options - Log/List Name Customization Pop-up

```
                  Options - Log/List Name Customization
Command ===> ____________________________________________________________________

You can define a customized name when you choose option PK (print/keep) or
K (keep) by specifying U(ser).  Specifying Y(es) on Prompt later lets you
define a custom name as you process each log/list file.  Otherwise,
specify data set name and file mode.  Then press Enter.

Options                   Log     List
------------------------- ---     ----
File Naming . . . . . . . U       U       U(ser) or S(ystem)
Prompt later for DSN  . . Y       Y       Y(es)  or N(o)

The following are needed if U(ser) and N(o) are specified above

Log Data set name   'USERID.TEST.VIALOG'                              (Seq)
     File Mode  . . O      O(verwrite) or A(ppend)
List Data set name  ____________________________________________        (Seq)
     File Mode  . . _      O(verwrite) or A(ppend)
```

3 Type `U` in the File Naming field for Log or List to define a user-defined dataset name.

If you specify `N` in the Prompt later for DSN field, you must enter a dataset name in the corresponding Dataset name field, and specify Overwrite or Append in the File Mode field.

If you specify `Y` in the Prompt later for DSN field, AutoChange prompts you for the dataset name during file processing.

Importing AutoChange Starter Set Strategies

You can define and maintain your own AutoChange conversion strategies. However, AutoChange provides starter sets to simplify your first use of AutoChange. The starter sets include date conversion strategies.

To use the predefined strategies, import them into the application using the procedure in "Importing and Exporting Strategies or Inline Strategies" on page 112. Use these tables to determine the correct dataset and member name information for starter set strategies:

Field	Description
Dataset Name	Enter the CNTL dataset name. See your systems administrator for the correct name of the dataset.
Member name	Use the next two tables to determine the member names you need to import, based on the version of AutoChange you are using and whether you are also using the Bridge product.

If you are using…	And…	Then import these members:	
		AutoChange strategies	Inline strategies
AutoChange, base version	You are using Bridge	VIAMASSS	VIAMISSS
AutoChange, base version	You are not using Bridge	VIAMNSSS	VIAMISSS

Member Descriptions

Member	Contains…
VIAMISSS	Inline strategies for date conversions.
VIAMASSS	AutoChange date conversion strategies for use with Bridge.
VIAMNSSS	AutoChange date conversion strategies for use without Bridge.

5 Applying Conversion Strategies

This chapter describes how to apply conversion strategies and contains these sections:

Apply the conversion strategies after you assign them to all program data items and associated copybooks.

AutoChange uses SmartEdit to insert code for each change, and to comment out the original code when AutoChange conversion strategies are applied. If a program contains Bridge Records, the Bridge initialization CALL statement is inserted into the program when you apply strategies.

Prerequisite Actions for Applying Strategies

Before applying strategies to a program, complete these tasks:

- Assign conversion strategies to all data items in the program and its associated copybooks.
- Confirm Inline apply options are correctly set before applying Inline strategies. The Inline apply options are initially set as Product Parameters (see "To verify or to change product parameters" on page 14). However, you can override those settings for a single Apply session (see "To designate apply options for Inline strategies" on page 22).
- If you set the Inline apply option to PROMPT before applying Inline strategies, define how inline statements are handled when the strategy is applied (see "To define inline statement handling" on page 23).

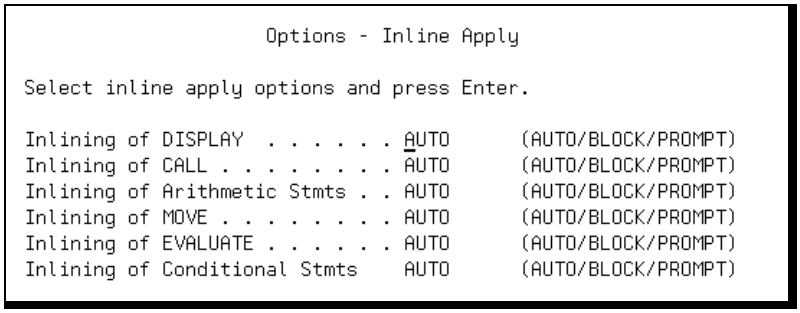
Applying Strategies

To designate apply options for Inline strategies

1 To select a program to apply strategies to, type `Y` on the Conversion Set screen and press Enter. The Apply Strategies screen displays.

2 Select Options ▸ Inline apply options and press Enter. The Options - Inline Apply pop-up displays (see Figure 12).

Figure 12 • The Options - Inline Apply Pop-up



3 Specify the apply option for certain types of statements.These are the valid values:

Value	Description
AUTO	Inline strategies are automatically applied to the specified statement type when you perform an Apply action. For CALL statements, the logic is also automatically reverse converted, restoring the original field definition.
BLOCK	Nothing is applied for the specified statements when you perform an Apply action.
PROMPT	Displays the Specify Inline Handling pop-up listing the specified statements and lets you decide how to handle them. See "To define inline statement handling" on page 23 for more information.

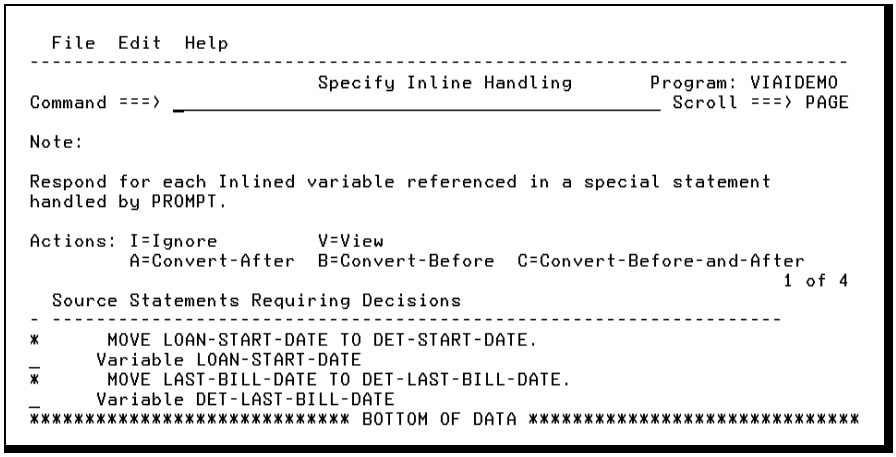
To define inline statement handling

You must define inline statement handling if you select the PROMPT apply option for certain statement types.

1 Type `Y` on the Conversion Set screen and press Enter to select a program to apply strategies to. The Apply Strategies screen displays.

2 Select File ▸ Inline Stmt Handling and press Enter. The Specify Inline Handling pop-up displays, listing the statements assigned the PROMPT option (see Figure 13).

Figure 13 • The Specify Inline Handling Pop-up



3 Assign an action to each item listed in the Source Statements Requiring Decisions section. These are the valid values:

Value	Description
Ignore	Ignores conversion for this statement only.
Convert-After	Automatically applies Inline strategies to the data item (or items) after the statement is executed.
Convert-Before	Automatically applies Inline strategies to the data item (or items) before the statement is executed.
Convert-Before and-After	Automatically applies Inline strategies to the data item (or items) during Apply action and then performs reverse conversion of logic to restore original field definition.
View	Displays the source code using Insight.

To apply assigned conversion strategies

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Type `Y` and press Enter to select a program for application of conversion strategies.

The Apply Strategies screen displays if strategies need to be applied to copybooks related to the program. Continue with step 3.

Or

The SmartEdit update screen displays if the program has no related copybooks, or if strategies have been applied to all related copybooks. Proceed to step 4 on page 25.

Note:
The program is unselectable until you apply strategies to all copybooks.

3 Select a copybook or a program and press Enter. The SmartEdit Update screen displays, showing information for the copybook or the program (see Figure 14).

Figure 14 • SmartEdit Update Screen

```
ASG-SmartEdit - R7.0 EDIT - VIAINST.CE50D001.CNTL(VIAFDEMO) COLUMNS 00001 00072
Command ===>                                                 Scroll ===> CSR
****** ***************************** Top of Data ******************************
000100 000100 IDENTIFICATION DIVISION.
000200 000200 PROGRAM-ID. VIAFDEMO.
000300 000300 AUTHOR. WRITTEN BY ASG AT LANGLVL 2.
000400 000400 ENVIRONMENT DIVISION.
000500 000500 CONFIGURATION SECTION.
000600 000600 SOURCE-COMPUTER. IBM-370.
000700 000700 OBJECT-COMPUTER. IBM-370.
000800 000800 INPUT-OUTPUT SECTION.
000900 000900 FILE CONTROL.
001000 001000     SELECT MASTERIN ASSIGN TO S-MASTERIN.
001100 001100     SELECT MASTER-RPT ASSIGN TO S-MREPORT.
001200 001200 DATA DIVISION.
001300 001300 FILE SECTION.
001400 001400 FD MASTERIN
001500 001500    RECORDING MODE IS F
001600 001600    BLOCK CONTAINS 0 RECORDS
001700 001700    LABEL RECORDS ARE STANDARD.
001800 001800
001900 001900    COPY VIAFMAST.
002000 020000
002100 021000 FD MASTER-RPT
```

4 Type `UPDATE ALL` on the command line and press Enter. A message displays stating how many lines of code were inserted.

5 Press PF3 to return to the Apply Strategies screen.

6 Continue applying strategies.

Or

Press PF3 to return to the Conversion Set screen.

If an update fails for any data items, they are identified and grouped for resolution.

Note:
When applying conversion strategies for IDMS records, AutoChange creates a report of the required updates so your database administrator can apply the changes.

To edit strategies after they are applied, follow this step:

- Type E on the Plan Strategies screen. See "Editing a Member with Conversion Strategies Applied" on page 25.

Editing a Member with Conversion Strategies Applied

You might need to edit data item information if a program is changed after a strategy has been applied.

To edit a member with applied strategies

1 Select File ▸ Open Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Type an eight character line tag in columns 73 through 80 to identify lines that AutoChange modifies. This is optional.

3 Type E next to the program to edit and press Enter. The Edit Applied Member screen displays.

4 Select the program, copybook, or IDMS record name to edit and press Enter. The SmartEdit screen displays.

5 Edit the code and press PF3 to save changes and return to the Edit Applied Member screen.

6 Press PF3 to return to the Conversion Set screen.

Rolling Back Conversion Strategy Application

Roll back or remove the changes made to the source code in the staging libraries if problems are discovered, or if applied conversion strategies need changed. You can then modify and reapply conversion strategies. If you promoted the program or the copybook, it must be promoted again to incorporate the reapplied strategies.

To roll back the application of conversion strategies

1 Select File ▸ Open Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select the programs or the copybooks to roll back and press Enter.

3 Select Actions ▸ Rollback source and press Enter. A message stating the source is being copied displays. The Apply date is removed from the Apply column.

6 Creating a Conversion Set

This chapter explains how to create a conversion set and contains these sections:

Conversion Set Components

These are the components of the conversion set:

Component	Description
Impacted data item application definition information	Information imported into an AKR from the import file generated as a result of running VIAJEXCV or VIABEXCV.
AKR	Dataset allocated during the creation of a conversion set to store the impacted data item list and the program analysis information.
Source code staging libraries	Libraries and backup libraries usually allocated during creation of conversion set to contain copies of original source code for selected programs and corresponding copybooks. You have the option of allocating libraries and copying the source code later during the staging phase.

AutoChange detects the source and copy library types and, if required, prompts you to specify Panvalet or Librarian source manager parameters. After conversion sets are created, you can open and close them from the AutoChange Primary screen.

Creating Parameters

Specify Product Parameters pop-up settings (Figure 8 on page 14) to create the staging and backup libraries, and to copy the source code into the staging and backup libraries when the conversion set is created (see "Verifying User Options" on page 14).

If you set the product parameters to automatically create the libraries, AutoChange uses the conversion set name to name the AKR and staging libraries.

Note:

These instructions assume the parameter setting is Yes for the Allocate at create and Copy at create fields on the Product Parameters pop-up.

Creating a Conversion Set

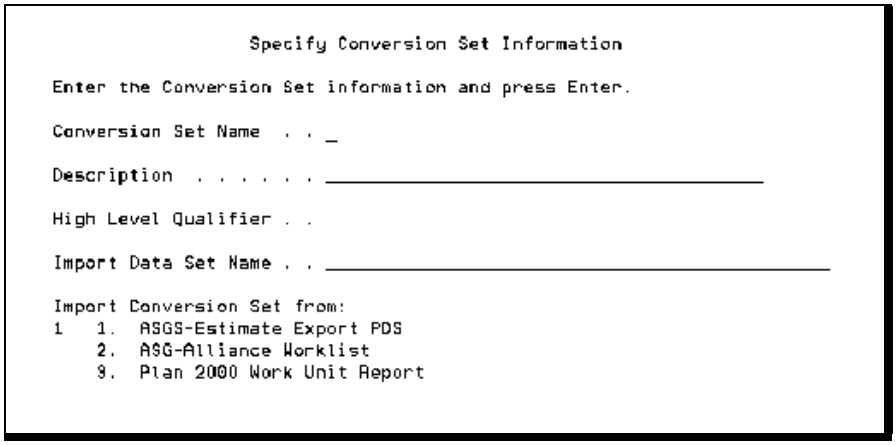
To create a conversion set

1 Select File ▸ New from the AutoChange Primary screen and press Enter. The File - New pop-up displays (see Figure 15).

Figure 15• File - New Pop-up

2 Select Conversion Set and press Enter. The Specify Conversion Set Information pop-up displays (see Figure 16).

Figure 16• Specify Conversion Set Information Pop-up



3 Type the conversion set name, description, high-level qualifier, and the import dataset name in the corresponding fields.

4 Specify the source of the imported information and press Enter.

The Verifying Import Data pop-up displays briefly as the import file processes (see Figure 17).

Then the Verify Source Manager Requirements pop-up displays (see Figure 18 on page 30).

Figure 17• Verifying Import Data Pop-up

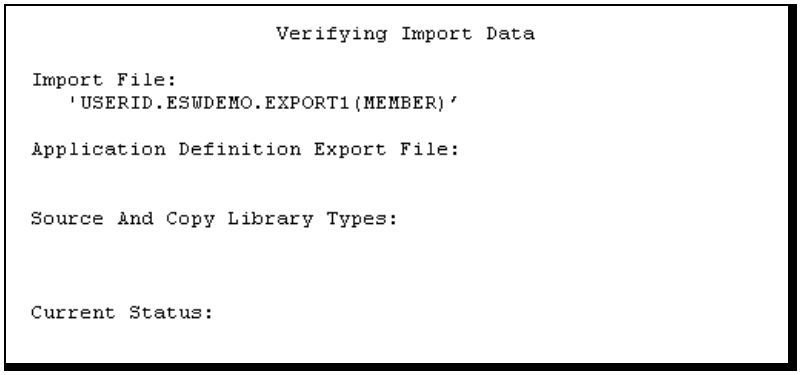
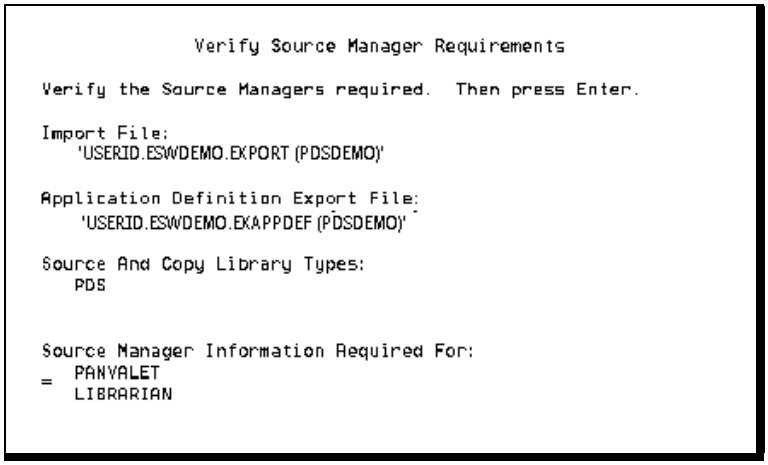


Figure 18• Verify Source Manager Requirements Pop-up

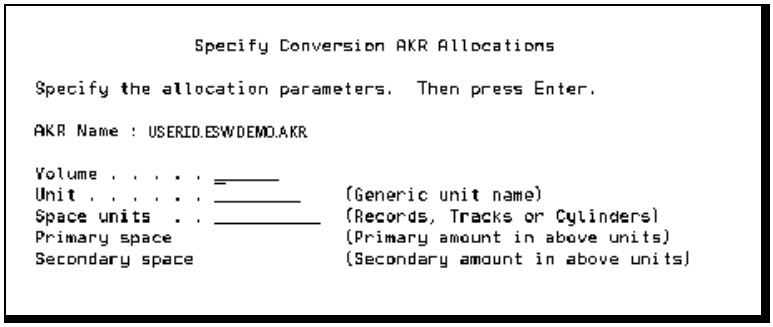


Note:

These files are created using the Export to AutoChange function in Alliance and Estimate. See the *ASG-Alliance User's Guide* or the *ASG-Estimate User's Guide* for more information.

5 If Panvalet or Librarian source manager parameters are *not* required, press Enter. The Specify Conversion AKR Allocations pop-up displays (see Figure 19). Proceed to step 6.

Figure 19• Specify Conversion AKR Allocations Pop-up



If Panvalet or Librarian source manager parameters are required, the source manager is marked to the left with a forward slash (/). Proceed to step a.

a Press Enter. The Specify Panvalet Parameters pop-up (see Figure 20) or the Specify Librarian Parameters pop-up displays (see Figure 21). The pop-ups appear in succession if parameters are required for both source managers.

b Specify the source manager parameters and any site-specific initialization parameters in the appropriate fields. Type the block size for the backup and staging libraries, if required.

Figure 20• Specify Panvalet Parameters Pop-up

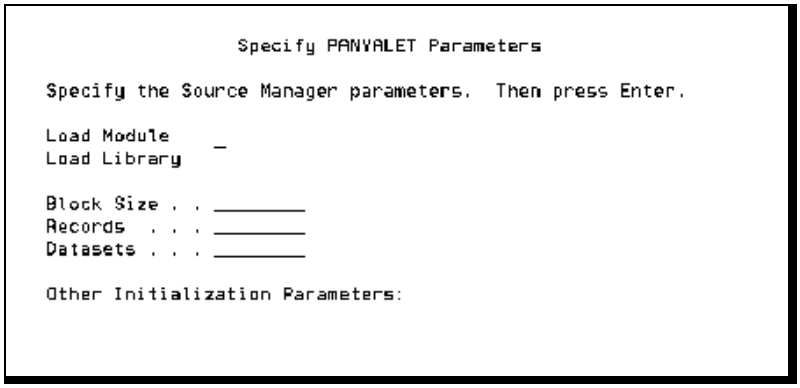
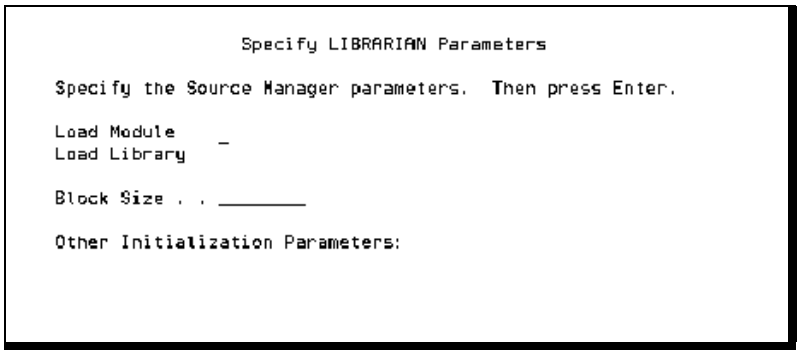
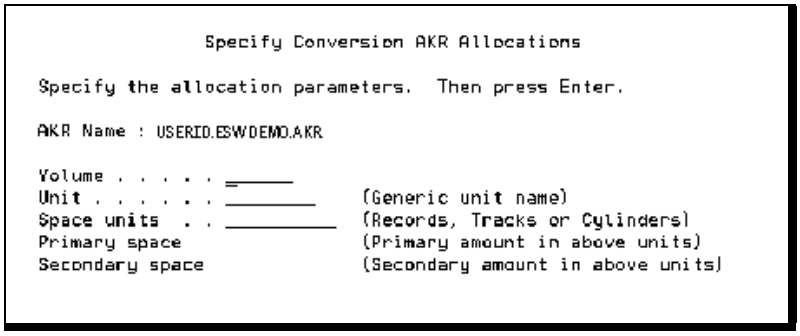


Figure 21• Specify Librarian Parameters Pop-up



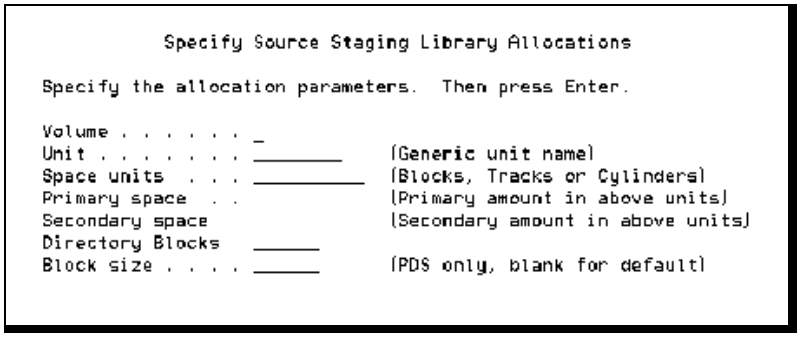
6 Press Enter. The Specify Conversion AKR Allocations pop-up displays after you complete source manager parameter specifications (see Figure 22).

Figure 22• Specify Conversion AKR Allocations Pop-up



7 Specify the AKR allocation parameters and press Enter. The Specify Source Staging Library Allocations pop-up displays (see Figure 23).

Figure 23• Specify Source Staging Library Allocations Pop-up



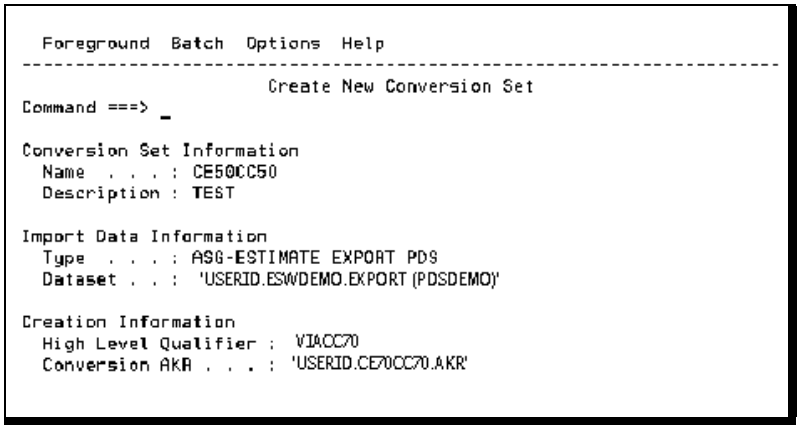
Note:

If you set the Allocate and Copy at create parameters on the Product Parameters pop-up to `No`, you must specify source manager parameters and allocate the staging libraries on the Staging Library Allocation screen after you create the conversion set (see "After Conversion Set Creation" on page 49).

If you have an IDMS environment and set the Allocate and Copy at create parameter to `Yes`, only the programs are staged. IDMS records do not need to be staged.

8 Specify staging library allocations and press Enter. The Create New Conversion Set pop-up displays (see Figure 24).

Figure 24• Create New Conversion Set Pop-up



9 Review the conversion set information and initiate the creation of the conversion set in Foreground or in Batch mode.

Note:

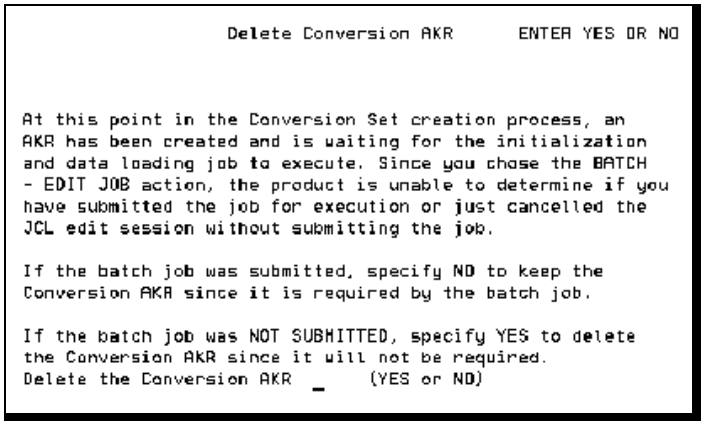
Foreground Mode might use considerable system resources, depending on system capabilities and conversion set size.

Create Method	Description
Foreground Mode	Select Foreground ▸ Create Set and press Enter to process the conversion set information processes. You are returned to AutoChange Primary screen.
Batch Mode	Select Batch ▸ Submit job and press Enter. The job submits and you are returned to AutoChange Primary screen.
Edit Batch Job and Submit	To review or edit the job before submission, select Batch ▸ Edit Job and press Enter. Type `TSO SUBMIT` on the command line and press Enter. Press PF3 to return to Create New Conversion Set pop-up. Press PF3 to confirm continuation of the conversion set creation process on the Delete Conversion AKR pop-up.

10 If you edit the batch job, AutoChange does not know you submitted a job for execution when you leave the edit session. The Delete Conversion Set screen displays asking if you want to continue (see Figure 25).

- If you submitted the job and want to continue conversion set creation, select NO in the Delete the Conversion AKR field and press Enter to keep the conversion AKR. AutoChange completes the conversion set and returns you to the Primary screen.
- If you did not submit the job and do not want to create the conversion set, select YES in the Delete Conversion AKR field and press Enter to delete the conversion AKR. AutoChange cancels the conversion set creation process and returns you to the Primary screen.

Figure 25• Delete Conversion AKR Pop-up



Editing Job Statement Information

To edit the job statement information before job submission

1 Select Options ▸ Batch Execution from the Create New Conversion Set screen and press Enter. The Options - Batch Execution pop-up displays. Make the necessary modifications.

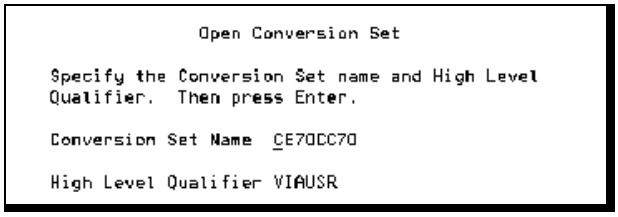
2 Press PF3 to save and return to the Create New Conversion Set screen.

Opening and Closing Conversion Sets

To open an existing conversion set

1 Select File ▸ Open Conversion Set from the AutoChange Primary screen and press Enter. The Open Conversion Set pop-up displays (see Figure 26).

Figure 26• Open Conversion Set Pop-up

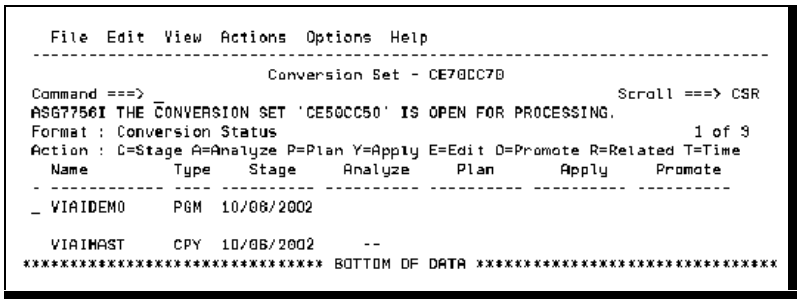


2 Type the name and high-level qualifier of the conversion set to open and press Enter. The Conversion Set pop-up displays (see Figure 27).

Note:

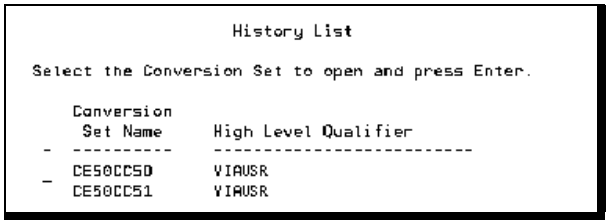
Specify the high-level qualifier and leave the Conversion Set Name field blank to choose from a list of the last five conversion sets you have opened.

Figure 27• Conversion Set Pop-up



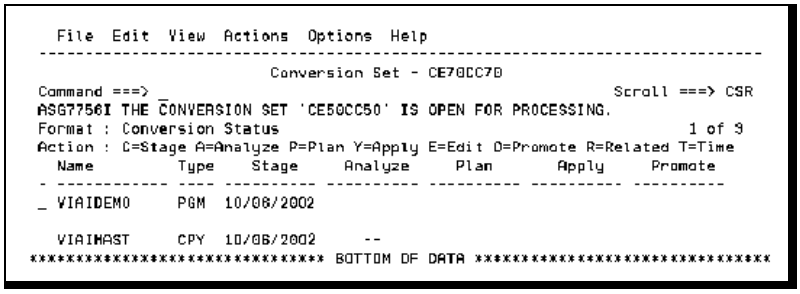
3 Press Enter. The History List pop-up displays (see Figure 28).

Figure 28• History List Pop-up



4 Select the conversion set you want to open and press Enter. The Conversion Set pop-up displays (see Figure 29).

Figure 29• Conversion Set Pop-up



To close a conversion set, follow this step:

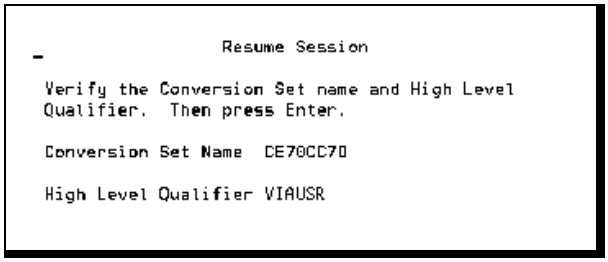
- Select File ▸ Close Conversion Set from the AutoChange Primary screen or the Conversion Set screen and press Enter. A message displays stating the conversion set is closed.

To resume working in the previously opened conversion set

If your work within a conversion set is interrupted, use the Resume Session feature to resume working in the last conversion set you opened.

1 Select File ▸ Resume Session and press Enter. The Resume Session pop-up displays showing the name and high-level qualifier of the last conversion set you opened (see Figure 30).

Figure 30• Resume Session Pop-up



2 Press Enter to open the conversion set specified on the pop-up. The Conversion Set screen displays.

7 Accessing Conversion Tasks

This chapter describes how to set up and use the Task Manager to access conversion tasks and contains these sections:

Conversion Process

The conversion process starts after you create a conversion set. You must perform conversion tasks in the proper sequence described in "Understanding AutoChange" on page 5 because some conversion tasks depend on the performance of prior tasks. For example, you must analyze programs before planning or assigning conversion strategies.

The Task Manager identifies and prioritizes a list of conversion tasks, guiding you through project tasks. Also, the Task Manager automatically takes you to the screen or the pop-up where a task is performed.

The Conversion Set screen lists the programs and copybooks in the conversion set and displays the date each task was performed, and optionally, the time of conversion. Compare the dates and times conversion task were performed to determine the priority of conversion tasks.

Conversion Tasks

Most conversion tasks described in this table are accessed from the Conversion Set screen or the Task Manager screen. For more information on completing a task, see the section of this guide referenced in this table:

Task	Description	See...
Stage the unit source	Stages or copies original source libraries to staging and backup libraries.	"Staging Source Code" on page 53.
Analyze unit	Performs an Insight analysis of selected programs.	"Analyzing Conversion Set Programs" on page 55.
Create strategies	Provides specific actions used to modify a data item.	"Understanding and Creating Strategies" on page 95.
Plan changes for impacted data items	Assigns conversion strategies to impacted data items in the selected program using Insight.	"Planning Conversion Strategies" on page 57.
Check for conflicts in strategies	Checks for conflicting conversion strategies assigned to impacted data items.	"Locating and Resolving Data Item Conflicts" on page 87.
Apply the changes to the staged source	Applies conversion strategies to source code in the staging libraries through SmartEdit.	"Applying Conversion Strategies" on page 21.
Promote staged source to target library	Promotes converted staged source code to user-defined target.	"Promoting Converted Programs and Copybooks" on page 125.
Roll back changes applied to the staged source	Rolls back, or removes, applied changes to source code for the selected programs or copybooks so you can reassign conversion strategies.	"Rolling Back Conversion Strategy Application" on page 26.

Using the Task Manager

The Task Manager generates a sequential task list to complete the conversion process for the currently open conversion set. The task list and status are updated on the Task Manager screen as you complete tasks. When you select a task, screens and pop-ups related to that task open. As you complete tasks, the next task displays on the task list.

To access the Task Manager

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

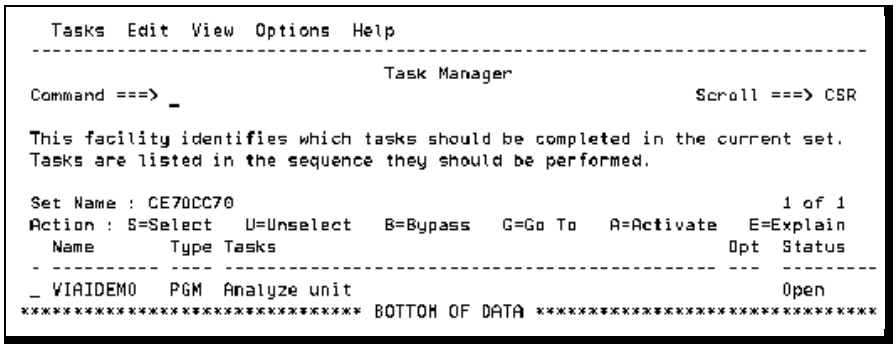
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Task List and press Enter. The Task Manager screen displays (see Figure 31).

Figure 31 • Task Manager Screen



Accessing Conversion Tasks from the Task Manager

Use the actions in this table to select, to bypass, or to access conversion tasks from the Task Manager:

To…	Use…	Description
Select all tasks	S	Selects and highlights tasks.
Unselect tasks	U	Clears selection and removes highlighting.
Go to tasks	G	Goes to the screen or the pop-up that initiates the task.
Bypass tasks	B	Indicates designated tasks are to be bypassed.
Activate tasks	A	Removes complete status from a task.
Explain tasks	E	Displays a brief explanation of the task.

Note:

You can also access these actions from the Edit pull-down on the Task Manager screen.

Setting View Options

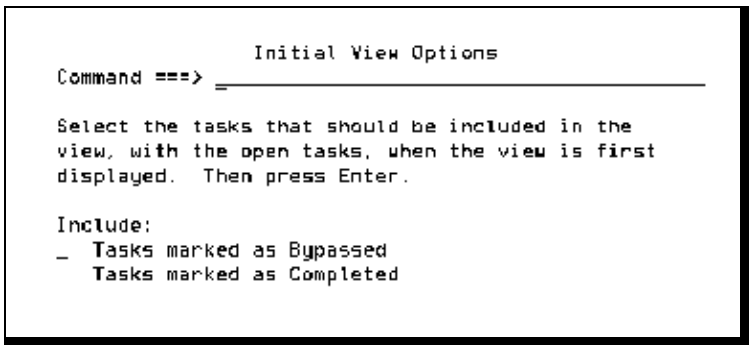
You can specify initial view options for the Task Manager that determine what tasks are shown each time you initially access the screen. You can also use the Task Manager screen to select different viewing parameters after you begin a session.

To specify initial view options for the Task Manager screen

1 Select View ▸ Task Manager and press Enter.

2 Select Options ▸ Initial view and press Enter. The Initial View Options pop-up displays (see Figure 32).

Figure 32 • Initial View Options Pop-up



3 Make selections to view tasks marked as bypassed, completed, or both.

4 Press Enter to save and return to the Task Manager screen.

To specify view options to override the initial view settings

1 Select View ▸ Task Manager and press Enter.

2 Select View ▸ Include and press Enter. The Include in View pop-up displays.

3 Make selections to view tasks marked as bypassed, completed, or both.

4 Press Enter to save and return to the Task Manager screen.

To reset the view to the initial view settings, follow this step:

- Select View ▸ Reset and press Enter.

Restoring the Task Manager List

The Task Manager list no longer displays the program if you used the G action to access the Plan Strategies screen and pressed PF3, or if you selected File ▸ Cancel to exit.

To restore the full list, follow this step:

- Select Reset ▸ View and press Enter.

Refreshing the Task Manager Screen

Occasionally a task executed from the Task Manager screen does not immediately display on the task list when you return to the Task Manager screen.

To refresh the task list to include recent actions, follow this step:

- Select File ▸ Refresh and press Enter.

Using the Conversion Set Screen

The Conversion Set screen lists the programs and copybooks to be converted, and contains pull-downs and line command actions for accessing conversion process tasks. You can specify viewing options, information formats, and access Bridge functions.

To open a conversion set, follow this step:

- Select File ▸ Open Conversion Set from the AutoChange Primary screen.

  Or

  If a conversion set is already open, Select View ▸ Conversion Set.

  Press Enter.

Viewing Options on the Conversion Set Screen

Information is presented on the Conversion Set screen in various formats.

To specify the information viewed and its format, follow this step:

- Select Options ▸ View from the Conversion Set screen and press Enter.

These are the options available on the Conversion Set screen:

View Option	Description
Include	Displays program names, copybook names, or both.
Expand all related	Shows the relationship between all programs and copybooks.
Collapse all related	Removes the relationship display.
Reset	Resets the screen to the default Conversion Status view.
Change format	Displays the Conversion Status or the Library Information view.
Sort	Displays a list of sort options for information on the screen.

The View pull-down options access these additional screens:

View Option	Description
Task List	Generates a sequential task list for the Conversion Set and displays it on the Task Manager screen.
Records to Bridge	Displays the Records to Bridge View screen that lists records designated as records to be bridged.

To specify what to include in the display

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

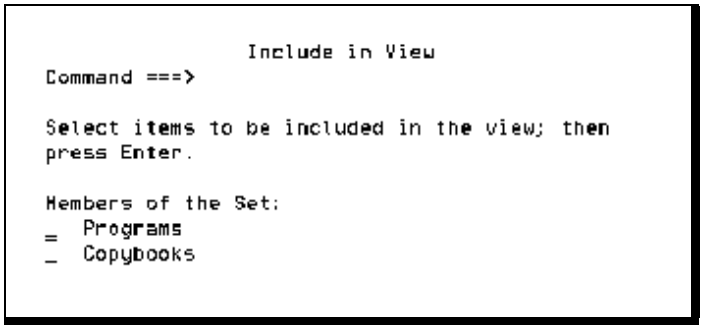
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Include and press Enter. The Include in View pop-up displays (see Figure 33).

Figure 33 • Include in View Pop-up



3 Make selections to specify programs, copybooks, or both for displayed elements.

4 Press Enter to return to the Conversion Set screen.

To expand or to collapse all programs and copybooks

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Expand All Related to view program and copybook relationships.

Or

Select View ▸ Collapse All Related to remove the relationship display.

3 Press Enter. The Conversion Set screen displays with the selected view. Figure 34 shows the view after choosing the Expand all related option.

Figure 34 • Conversion Set Screen - Expand All Related Option Selected

```
  File  Edit  View  Actions  Options  Help
--------------------------------------------------------------------------------
                        Conversion Set - CE70CC7D
Command ===> _                                              Scroll ===> CSR

Format : Conversion Status                                          1 of 5
Action : C=Stage A=Analyze P=Plan Y=Apply E=Edit D=Promote R=Related T=Time
  Name         Type    Stage     Analyze     Plan       Apply      Promote
- ------------ ---- ---------- ---------- ---------- ---------- ----------
_ VIAIDEMO     PGM  10/08/2002
    VIAIMAST   CPY  10/06/2002      --

  VIAIMAST     CPY  10/08/2002      --
    VIAIDEMO   PGM  10/08/2002
****************************** BOTTOM OF DATA ******************************
```

4 Type `R` to select a program or a copybook to be expanded or collapsed. Press Enter.

Displaying a Time Stamp for Completed Tasks

The time stamp shows when a task was completed.

To toggle the time stamp on or off, follow this step:

- Type `T` to select the programs or the copybooks that you want to toggle the time stamp on or off for.

To specify a sort order for displayed information

1. Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

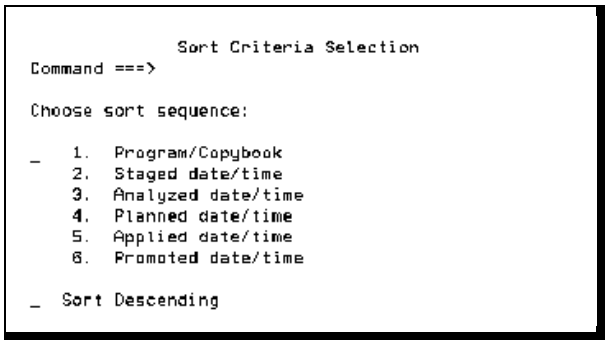
   Or

   If a conversion set is already open, Select View ▸ Conversion Set.

   Press Enter. The Conversion Set screen displays.

2. Select View ▸ Sort and press Enter. The Sort Criteria Selection pop-up displays (see Figure 35).

Figure 35 • Sort Criteria Selection Pop-up for Conversion Set Pop-up



3. Select the item to sort by, and whether the information will be sorted by descending values.

4. Press Enter to save the sort selections and return to the Conversion Set screen. The sorted information displays.

Changing the Display Format

AutoChange has two formats for displaying conversion set status and library information on the Conversion Set screen. These are the formats:

Format	Description
Conversion Status	Default format that shows each phase of conversion process and the date it was performed (see Figure 36).
Library Information	Shows names of original libraries and date source files copied to staging libraries (see Figure 37). Scroll right to view names of the staging and backup libraries.

Figure 36 • Conversion Set Screen - Conversion Status Format

```
  File  Edit  View  Actions  Options  Help
--------------------------------------------------------------------------------
                        Conversion Set - CE70CC70
Command ===> _                                            Scroll ===> CSR
ASG7756I THE CONVERSION SET 'CE50CC50' IS OPEN FOR PROCESSING.
Format : Conversion Status                                        1 of 3
Action : C=Stage A=Analyze P=Plan Y=Apply E=Edit O=Promote R=Related T=Time
  Name         Type    Stage      Analyze     Plan       Apply      Promote
- ------------ ---- ---------- ---------- ---------- ---------- ----------
  VIAIDEMO     PGM  10/08/2002

_ VIAIMAST     CPY  10/08/2002     --
****************************** BOTTOM OF DATA ******************************
```

Figure 37 • Conversion Set Screen - Library Information Format

```
  File  Edit  View  Actions  Options  Help
--------------------------------------------------------------------------------
                        Conversion Set - CE70CC70
Command ===> _____________________________________________ Scroll ===> CSR

Format : Library information                                      1 of 3
Action : C=Stage A=Analyze P=Plan Y=Apply E=Edit O=Promote R=Related T=Time
  Name         Type   Staged    Original library/IDMS Schema&Vers            >
- ------------ ---- ---------- ------------------------------------------------>
_ VIAIDEMO     PGM  10/08/2002 VIAUSR.ESWDEMO.SOURCE

  VIAIMAST     CPY  10/08/2002 VIAUSR.ESWDEMO.COPYLIB
******************************* BOTTOM OF DATA ********************************
```

To change the display format

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

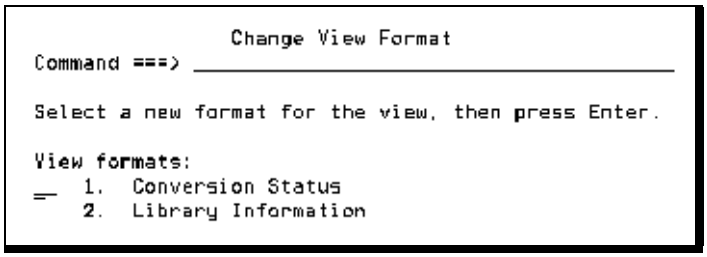
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Change Format and press Enter. The Change View Format pop-up displays (see Figure 38).

Figure 38 • Change View Format Pop-up



3 Select a format and press Enter to view it on the Conversion Set screen.

To reset the Conversion Set screen, follow this step:

- Select View ▸ Reset and press Enter. The Conversion Set screen reverts to the default view.

Selecting a Program or a Copybook

Use these actions to Select a program or a copybook (for more information, see the section of this user's guide referenced in this table):

To access task...	Use this action...	See....
Stage the source	C/Stage	"Staging Source Code" on page 53.
Analyze program	A/Analyze	"Analyzing Conversion Set Programs" on page 55.
Plan changes for impacted data items	P/Plan	"Planning Conversion Strategies" on page 57.
Apply changes to staged source	Y/Apply	"Applying Conversion Strategies" on page 21.

To access task...	Use this action...	See....
Promote staged source to target library	O/Promote	"Promoting Converted Programs and Copybooks" on page 125.
Roll back changes applied to staged source	Select a program or a copybook, select Actions ▸ Rollback Source, and press Enter.	"Rolling Back Conversion Strategy Application" on page 26.
Create and send Bridge Definitions and record layouts to Bridge	Select View ▸ Records to Bridge and press Enter.	"Creating Bridge Definitions for Bridge" on page 117.

To access the additional conversion process tasks described in this table, follow this step:

- Select the Actions pull-down on the Conversion Set screen.

For more information, see the section of this user's guide referenced in this table:

Task/Pull-down Action	Description	See...
Allocate libraries	Allocate staging and backup libraries if they were not allocated when the conversion set was created, or if the libraries were inadvertently deleted or corrupted.	"After Conversion Set Creation" on page 49.
Edit Applied member	Edit source using member that has already had strategies applied. You can also use the E/Edit action to access this task.	"Editing a Member with Conversion Strategies Applied" on page 25.
Import Strategies	Import conversion strategies assigned to a program/copybook from a different conversion set to program/copybook in the currently open conversion set.	"Importing Strategy Assignments from Other Conversion Sets" on page 84.
Rename Copy/Include	Rename a copybook in the currently open conversion set.	"Renaming a Copybook in the Conversion Set" on page 51.
Generate Reports	Generate reports with information regarding currently open conversion set.	"AutoChange Reports" on page 127.

After Conversion Set Creation

Specifying Source Manager Parameters After Conversion Set Creation

Specify source manager parameters and allocate staging libraries from the Conversion Set screen if this was not done when the conversion set was created. You do not need to specify source manager parameters if you are using Endevor.

To specify Panvalet or Librarian source manager parameters

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

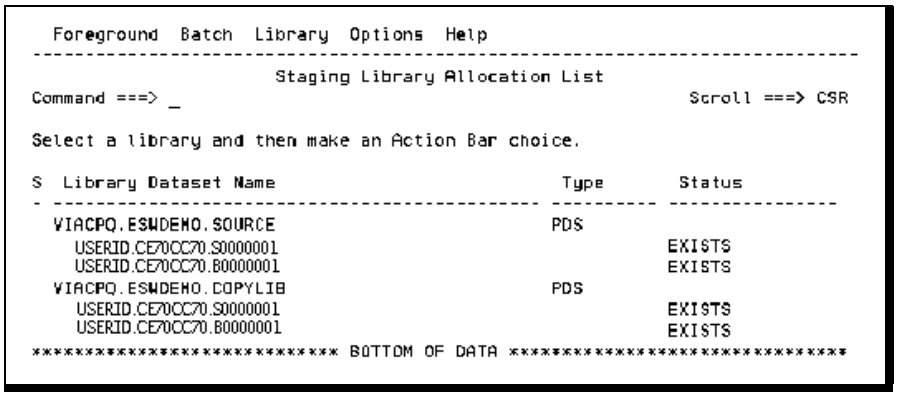
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select Actions ▸ Allocate libraries and press Enter. The Staging Library Allocation List screen displays (see Figure 39).

Figure 39 • Staging Library Allocation List Screen



3 Select the library for source manager parameter specification and press Enter.

4 Select Library ▸ Panvalet parameters (or Librarian parameters) and press Enter. The Specify Panvalet Parameters pop-up or the Specify Librarian Parameters pop-up displays.

5 Specify the source manager parameters and press Enter. The parameters are saved and you are returned to the Staging Library Allocation List screen.

6 Press PF3 to return to the Conversion Set screen.

Allocating Staging Libraries After Conversion Set Creation

To allocate a staging library

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select Actions ▸ Allocate Libraries and press Enter. The Staging Library Allocation List screen displays.

3 Select the library to be allocated and press Enter to highlight it.

4 Select Library ▸ Allocation parameters and press Enter. The Specify Source Staging Library Allocations pop-up displays.

5 Specify allocation parameters and press Enter to save the parameters and return to the Staging Library Allocation List screen.

6 To allocate the libraries, use one of these methods to select Foreground or Batch mode:

Create Method	Description
Foreground Mode	Select Foreground ▸ Allocate and press Enter to allocate the staging libraries. You are returned to Staging Library Allocation List screen.
Batch Mode	Select Batch ▸ Submit job and press Enter to submit the job. You are returned to Staging Library Allocation List screen.
Edit Batch job and submit	Select Batch ▸ Edit job and press Enter to review or to edit the job before submission. Type `TSO SUBMIT` on the command line and press Enter. Press PF3 to return to Staging Library Allocation List screen.

7 Press PF3 to return to the Conversion Set screen.

Renaming a Copybook in the Conversion Set

You can rename a copybook in the conversion set. You might do this if a copybook you are altering in the conversion set is used by other programs not in the conversion set.

If you rename a copybook, it is not renamed in the AutoChange backup libraries.

Note:
You cannot rename IDMS records.

To rename a copybook

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

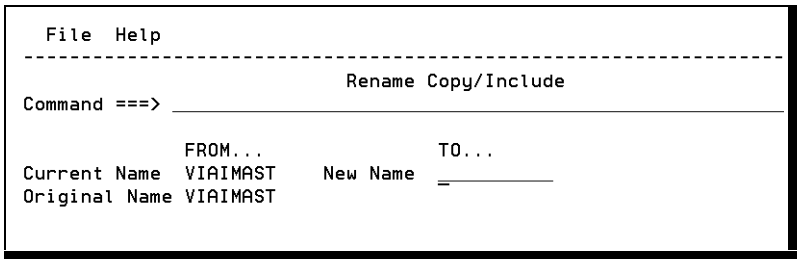
If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select the copybook to rename and press Enter to highlight it.

3 Select Actions ▸ Rename Copy/Include and press Enter. The Rename Copy/Include pop-up displays (see Figure 40).

Figure 40 • Rename Copy/Include Pop-up



4 Type the new name in the New Name field and press Enter. The new name is saved and the Conversion Set pop-up displays showing the new name.

To cancel the rename, follow this step:

▸ Press PF3 instead of Enter.

Or

Select File ▸ Exit.

8 Staging Source Code

The staging task copies the source code into the staging and backup libraries. After you create the conversion set, stage the original source if it was not automatically staged when the conversion set was created. The Allocate at create and Copy at create product parameters determine whether the staging occurs automatically (see "Verifying User Options" on page 14).

You can manually stage the code if you want the libraries and AKR to use a different naming convention than the conversion set (automatic creation uses the conversion set name in naming the library and AKR).

Note these differences, as they control whether you access the staging task from the Task Manager or the Conversion Set screen:

Access staging task from...	Result...
Task Manager screen	Selected program and related copybooks are staged.
Conversion Set screen	Programs and copybooks must be selected for staging.

Staging Source Code from the Conversion Set Screen

To stage source code from the Conversion Set screen

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Choose one of these options:

- Select Edit ▸ Select All to select all programs and copybooks.
- Type `C` to select one or more programs or copybooks and press Enter.
- Type `S` to select one or more programs or copybooks.

3 Press Enter to display.

4 Select Actions ▸ Stage and press Enter.

When staging is complete, the current date displays in the Stage column.

Note:

If you have an IDMS environment, you only need to stage the programs. IDMS records do not need to be staged.

9 Analyzing Conversion Set Programs

Analyze the conversion set programs after you stage the source code. This analysis identifies relationships between program components and generates the information used to assign conversion strategies. The conversion set AKR stores the analysis data. You can select multiple programs for analysis, but consider system resources.

Analyzing the Conversion Set Programs

To analyze the conversion set programs

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

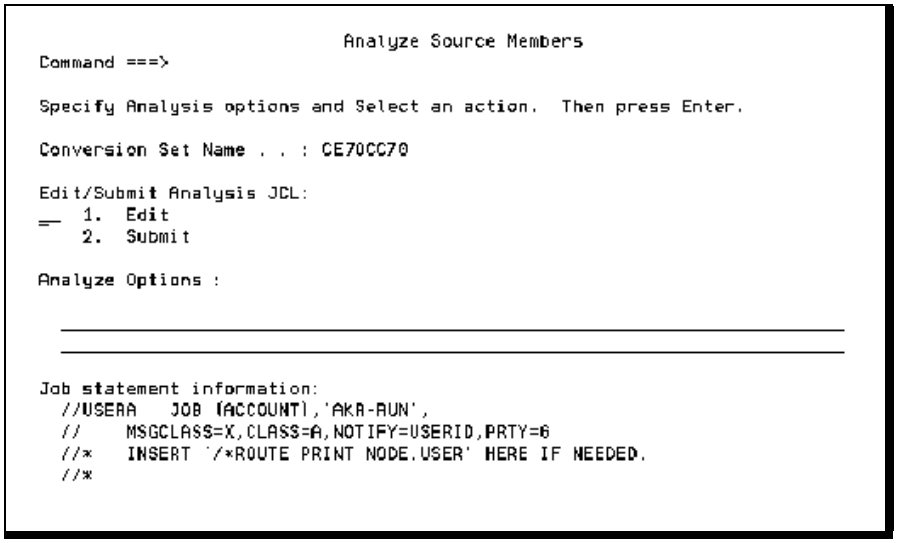
2 Select Edit ▸ Select All to select all programs.

Or

Type `A` to select one or more programs to analyze and press Enter. The Analyze Source Members pop-up displays.

3 Select Actions ▸ Analyze and press Enter. The Analyze Source Members pop-up displays (see Figure 41).

Figure 41 • Analyze Source Members Pop-up



4 Specify analyze options (see "Analyze Options," on page 141) if required, and verify or modify job statement information.

Note:

Specified analysis options are applied to all analyzed programs.

5 Select Submit. Press Enter to submit the analyze job and return to the Conversion Set screen.

Or

Select Edit to edit the job and submit. Make edits and type `TSO SUBMIT` on the command line. Press Enter.

6 Press PF3 to return to the Analyze Source Members pop-up. Press PF3 again to return to the Conversion Set screen.

7 Select File ▸ Refresh and press Enter to display the analyze date in the Analyze column.

10 Planning Conversion Strategies

This chapter describes how to modify data item formats using AutoChange and Inline strategies and contains these sections:

You can assign a conversion strategy to each impacted data item in a conversion set analyzing the conversion set. A strategy is a conversion method used to change an impacted data item. You can create your own strategies to assign, or you can use the strategies provided in the AutoChange starter sets.

AutoChange provides conversion strategy starter sets that perform these functions:

- Does not change the data item.
- Does not change the data item but flags it.
- Expands the data item field to the left by two.
- Expands the data item field to the right by two.
- Adds decimal places to the data item field.
- Increases or decreases the data item field by a specified amount.
- Covers a specific source currency to a specific target currency.
- Changes size of decimal fields for currency conversions.
- Applies inline strategies.
- Applies Bridge Rules (if Bridge is installed).

To assign conversion strategies to a conversion set

Note:
ASG recommends you assign conversion strategies to a conversion set in this order.

1. Assign strategies to data items in copybooks.
2. Propagate strategies to related data items in the conversion set.
3. Assign strategies to any remaining program data items.

AutoChange detects, flags, and explains strategy conflicts between data items that exchange values. Use this information to resolve conflicts and ensure compatible conversion strategy assignments among related data items.

When you assign conversion strategies, AutoChange dynamically links to Insight. Here, you control strategy assignment using the Plan Strategies screen. The Plan column on the Conversion Set screen displays the date the Plan action executed after you assign strategies to all impacted data items in a program and related copybooks.

Introducing the Plan Strategies Screen

You assign conversion strategies from the Plan Strategies screen. This screen displays a list of impacted data items and related information for a selected program. Customize the data item list to include or to exclude items, and apply sort criteria to present them in groups.

You may need more information regarding the source, record layout, or data flow of items to determine what conversion strategies to assign. Use actions and pull-down options on the Plan Strategies screen to access that information.

To access the Plan Strategies screen

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Type `P` to select a program.

Or

Select View ▸ Task List.

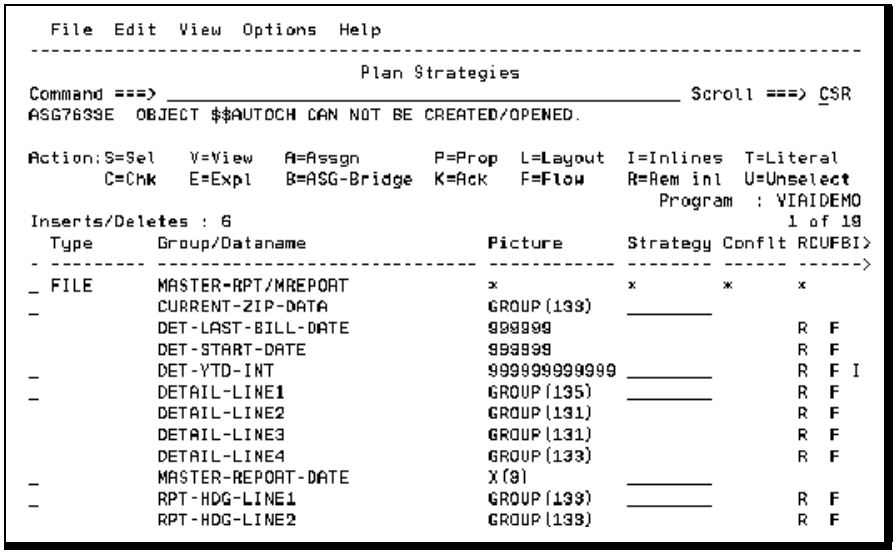
Press Enter. The Task Manager screen displays (see Figure 31 on page 39).

3 Type `G` to select a program for planning and press Enter. The Plan Strategies screen displays (see Figure 42 on page 60 and Figure 43 on page 60).

Note:

If AutoChange detects misfiled data items the Resolve Misfiled Items screen displays. Select a disposition for these items before accessing the Plan Strategies screen. See "Resolving Misfiled Data Items" on page 62 .

Figure 42 • Plan Strategies Screen



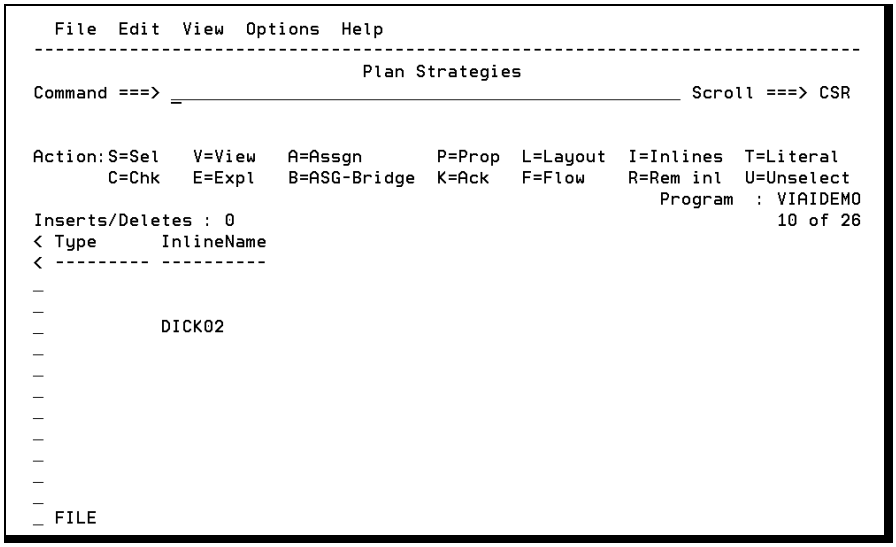
```
  File  Edit  View  Options  Help
--------------------------------------------------------------------------------
                              Plan Strategies
Command ===> _____________________________________________ Scroll ===> CSR
ASG7633E  OBJECT $$AUTOCH CAN NOT BE CREATED/OPENED.

Action: S=Sel   V=View   A=Assgn       P=Prop  L=Layout  I=Inlines  T=Literal
        C=Chk   E=Expl   B=ASG-Bridge  K=Ack   F=Flow    R=Rem inl  U=Unselect
                                                  Program  : VIAIDEMO
Inserts/Deletes : 6                                          1 of 19
  Type      Group/Dataname                Picture      Strategy Conflt RCUFBI>
- --------- ----------------------------- ------------ -------- ------ ------>
_ FILE      MASTER-RPT/MREPORT            x            x        *      x
_           CURRENT-ZIP-DATA              GROUP(133)   ________
            DET-LAST-BILL-DATE            999999                       R  F
            DET-START-DATE                999999                       R  F
_           DET-YTD-INT                   999999999999 ________        R  F I
_           DETAIL-LINE1                  GROUP(135)   ________        R  F
            DETAIL-LINE2                  GROUP(131)                   R  F
            DETAIL-LINE3                  GROUP(131)                   R  F
            DETAIL-LINE4                  GROUP(133)                   R  F
_           MASTER-REPORT-DATE            X(8)         ________
_           RPT-HDG-LINE1                 GROUP(133)   ________        R  F
            RPT-HDG-LINE2                 GROUP(133)                   R  F
```

Note:

To see the name of an Inline strategy assigned to a data item, scroll to the right.

Figure 43 • Plan Strategies Screen (right side)



```
  File  Edit  View  Options  Help
--------------------------------------------------------------------------------
                              Plan Strategies
Command ===> _____________________________________________ Scroll ===> CSR


Action: S=Sel   V=View   A=Assgn       P=Prop  L=Layout  I=Inlines  T=Literal
        C=Chk   E=Expl   B=ASG-Bridge  K=Ack   F=Flow    R=Rem inl  U=Unselect
                                                  Program  : VIAIDEMO
Inserts/Deletes : 0                                          10 of 26
< Type      InlineName
< --------- ----------
_
_
_           DICK02
_
_
_
_
_
_
_
_ FILE
```

Note:

The Task Manager list does not display if you use the G action to access the Plan Strategies screen from the Task Manager screen and then exit by pressing PF3 or by selecting File ▸ Cancel.

To restore the Task Manager list, follow this step:

- Select Task Manager ▸ View ▸ Reset and press Enter to restore the list**.**

This table describes the information presented on the screen:

Field	Description
Type	Indicates sort order of data items, such as File, Size, or Picture.
Group/Dataname	Specifies the data item name or the group name.
Picture	Specifies the original format and length of data item.
Strategy	Identifies the conversion strategy assigned to data item.
Conflt	Indicates a strategy conflict with one or more data items.
RCUFBI	Provides codes to indicate a certain data item status.
R	Indicates that the data item is referenced in the current program.
C	Indicates that the data item is in a copybook.
U	Specifies that the copybook where the data item resides is in use.
F	Indicates that the data item is referenced in a data flow.
B	Indicates that the record is designated as Bridge Record.
I	Indicates that an Inline strategy has been assigned to the data item Scroll right to see the Inline strategy name in the InlineName column.
InlineName	Specifies the name of the Inline strategy assigned to a data item.

Resolving Misfiled Data Items

If AutoChange detects misfiled data items when you access the Plan Strategies screen, the Resolve Misfiled Items screen displays (see Figure 44). Misfiled items are detected during the analysis of programs within the conversion set. If AutoChange finds data items residing in a source member other than the member specified in the information imported from Estimate or Alliance, it flags those data items as misfiled.

Misfiling occurs when you modify the source by moving a program item into a copybook after the original Estimate or Alliance impact analysis. You must delete misfiled items or move them into the impacted data item list before you can access the Plan Strategies screen. The Plan Strategies screen has a source view used to see where the data item occurs in the source. Use this information to decide whether to delete the data item or to move it into the impact list.

Figure 44 • Resolve Misfiled Items Screen

```
  File  Edit  Help
--------------------------------------------------------------------------------
                          Resolve Misfiled Items           Program: VIAIDEMO
Command ===> _____________________________________________ Scroll ===> CSR

Note:

The Impact Analysis found items in a different source member than detected by
ASG-Insight Analysis.  Most likely, source had been changed after the Impact
analysis.  Before planning this program, each item must be dispositioned.  You
may Delete or Move each item.  If copybook is in use by another user, you must
retry after the other user has freed the member.  When all items have been
dispositioned, use the SAVE command to store the changes.

Actions: S=Sel U=Unsel V=ViewSource M=Move D=Delete R=Reset
                                                                      1 of 2
  Dataname                       U Impact Member Actual Member Disposition
- ------------------------------ - ------------- ------------- -----------
_ DET-START-DATE                   VIAIDEMO      VIAIMAST
_ DETAIL-LINE1                     VIAIDEMO      VIAIMAST
******************************** BOTTOM OF DATA ********************************
```

To view data items as they appear in the source code

1 Type V to select the items to view in the source code and press Enter. The Insight Source View screen displays with the selected data items highlighted.

Note:

See online help for more information on the Insight Source View screen.

2 Press PF3 to return to the Resolve Misfiled Items screen.

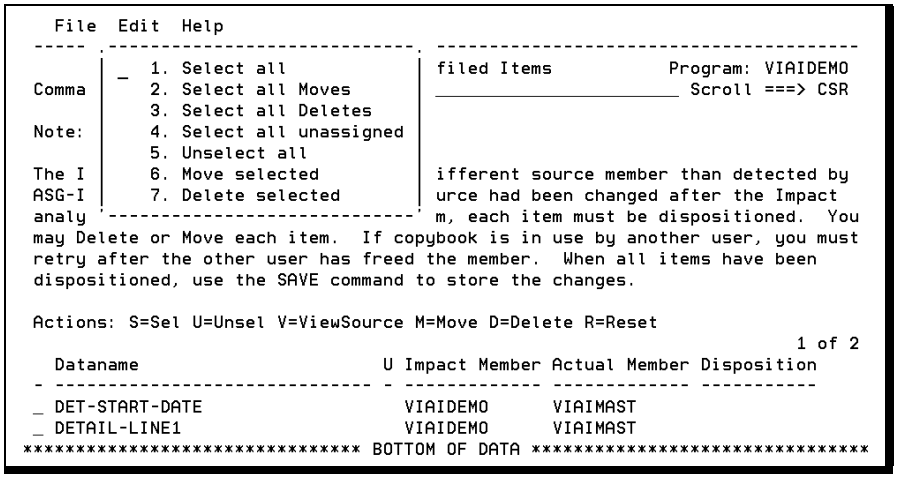
To move or to delete misfiled items

1 Type `M` (Move) or `D` (Delete) to select items you want to move or to delete and press Enter. The designated action displays in the Disposition column.

Or

Type `S` or use an option on the Edit pull-down to select the items you want to move or to delete (see Figure 45).

Figure 45 • Edit Pull-down on Resolve Misfiled Items Screen



2 Select Edit ▸ Move selected.

Or

Edit ▸ Delete selected and press Enter.

The designated action displays in the Disposition column.

3 Select File and choose one of these options:

File Option	Description
Save and continue	Saves disposition selections and returns to the Resolve Misfiled Items screen.

File Option	Description
Save and exit	If dispositions are selected for all items, saves and goes to the Plan Strategies screen. If any items do not yet have dispositions selected, saves items with selected dispositions and returns to Conversion Set screen. When you attempt to plan the program again, the Resolve Misfiled screen displays listing remaining items for disposition. You must select a disposition for all misfiled items before you can access the Plan Strategies screen.
Cancel and exit	Cancels disposition selections and returns to the Conversion Set screen

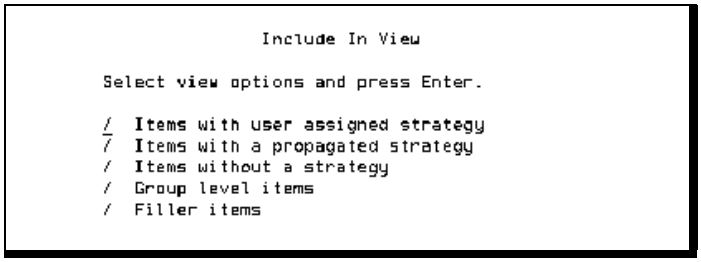
Controlling Displayed Information

Use View options and sort criteria to control items included in the data item list, and to organize the data items into different sequences showing specific groupings.

To specify data items to include in the data item list

1 Select View ▸ Include from the Plan Strategies screen and press Enter. The Include in View pop-up displays (see Figure 46).

Figure 46 • Include In View Pop-up (Plan Strategies Screen)



2 Select the items to include in the data item list and press Enter. The Plan Strategies screen displays with the selected data items.

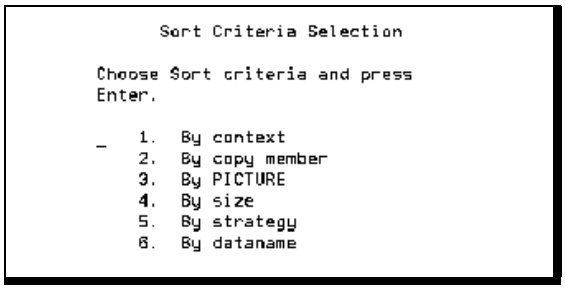
To reset the view to include all data items, follow this step:

- Select View ▸ Reset from the Plan Strategies screen and press Enter. The Plan Strategies screen displays showing all data items.

To specify sort criteria for data items

1 Select View ▸ Sort by from the Plan Strategies screen and press Enter. The Sort Criteria Selection pop-up displays (see Figure 47).

Figure 47 • Sort Criteria Selection Pop-up



2 Choose sort criteria and press Enter. The Plan Strategies screen displays, with data items sorted according to the specified criteria.

Selecting Data Items

Access the options described in this table from the listed actions or the Edit pull-down on the Plan Strategies screen. Use these options to select groups of data items for particular tasks:

To Select…	Use this option…
All data items	Select all
Data items assigned a conversion strategy	Select all assigned
Data items without an assigned conversion strategy	Select all unassigned

To Unselect…	Use this option…
All selected data items	Unselect all
Individual data items	Type U next to the item or items

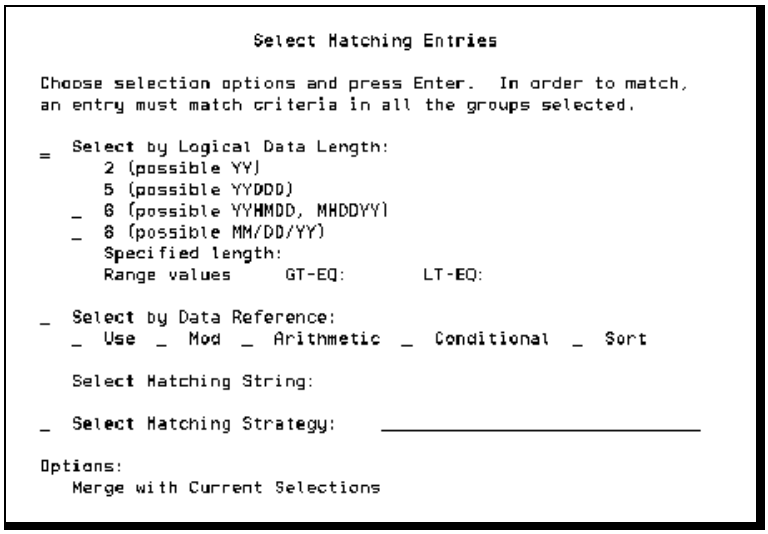
To select a group of data items, follow this step:

- Specify matching criteria, such as logical data length and data reference, or a text string.

To select data items matching certain criteria

1 Select Edit ▸ Select Matching from the Plan Strategies screen and press Enter. The Select Matching Entries pop-up displays (see Figure 48).

Figure 48 • Select Matching Entries Pop-up



2 Specify the criteria to match. Press Enter to return to the Plan Strategies screen with the matching data items highlighted.

Note:

The Select Matching String option only searches the Group/Dataname column on the Plan Strategies screen.

Accessing Information

Line command actions and pull-down options assist strategy planning by providing access to copybook and IDMS record views, record source code, layout structure, and data flow information.

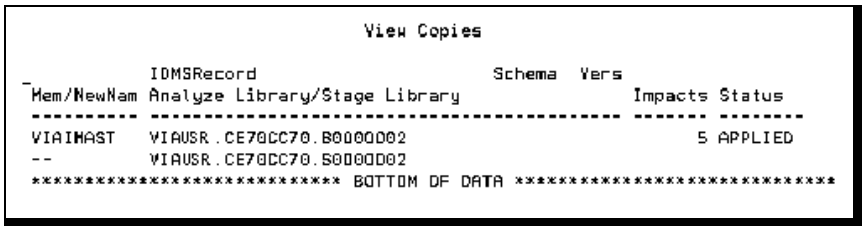
Accessing Copybook and IDMS Record Information

The View Copies pop-up provides information about libraries, status, and the number of impacted data items in a copybook.

To access the View Copies pop-up

1 Select View ▸ View copies from the Plan Strategies screen and press Enter. The View Copies pop-up displays (see Figure 49).

Figure 49 • View Copies Pop-up



2 Press PF3 to return to the Plan Strategies screen.

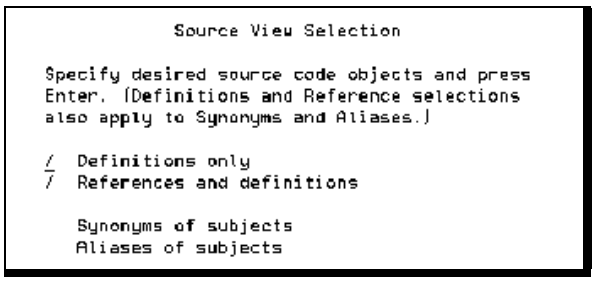
Accessing Source Information

View selected data items as they appear in the program source code on the Source View screen. You can specify the source code objects you want to view from this screen.

To specify source view options and access the Source View screen

1 Select Options ▸ Source view options from the Plan Strategies screen and press Enter. The Source View Selection pop-up displays (see Figure 50).

Figure 50 • Source View Selection Pop-up



2 Specify the source code objects to view. Press Enter to return to the Plan Strategies screen.

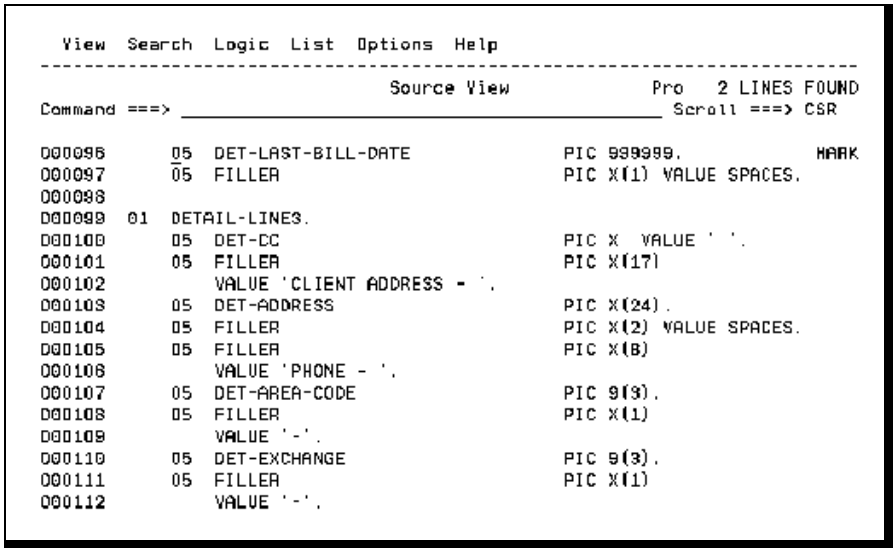
3 Type V to select data items to view in the program source code. Press Enter. The Source View screen displays with the selected items and specified objects highlighted.

Or

Type S or use one of the Edit pull-down options to select the data items to view in the program source code.

4 Select View ▸ View source and press Enter. The Source View screen displays with the selected items and specified objects highlighted (see Figure 51).

Figure 51 • Source View Screen



5 Press PF3 to return to the Plan Strategies screen.

Accessing Structure Layout Information

The Structure Layout Screen

Use the Structure Layout screen to review record length and to redefine the program structure layout where the selected data items reside. You can also use this screen to insert fields, to delete or undelete selected items, and to assign conversion strategies.

To access and use the Structure Layout screen

1 Type `L` to view the related record structure of a selected data item on the Plan Strategies screen and press Enter. The Structure Layout screen displays with the selected item highlighted (see Figure 52).

Note:

You may have to scroll down the screen to view the selected data item.

Figure 52 • Structure Layout Screen

```
  File  View  Help
--------------------------------------------------------------------------------
                              Structure Layout
Command ===> _                                              Scroll ===> CSR

Actions: V=View A=Assign F=Flow *=Zoomout -=Zoomin I=Insert D=Delete U=Undel

  OldLn +Size Offset Original Source
- ----- ----- ------ --------------------------------------------------------
_   139           0  01  CURRENT-ZIP-DATA REDEFINES DETAIL-LINE4.
_    55           0      05  FILLER                          PIC X(55).
      9          55      05  CUR-PREFIX                      PIC 9(9).
     75          58      05  FILLER                          PIC X(75).
******************************** BOTTOM OF DATA ********************************
```

2 Review the information or use one of the actions listed in this table:

To…	Do this…
Insert a field	Use the I action.
Delete an item	Use the D action to select elements for deletion and press Enter. Selected elements are marked for deletion.
Undelete an item marked for deletion	Use the U action to select elements marked for deletion and press Enter.
Assign conversion strategy to data item	Use the A action to select the data item.

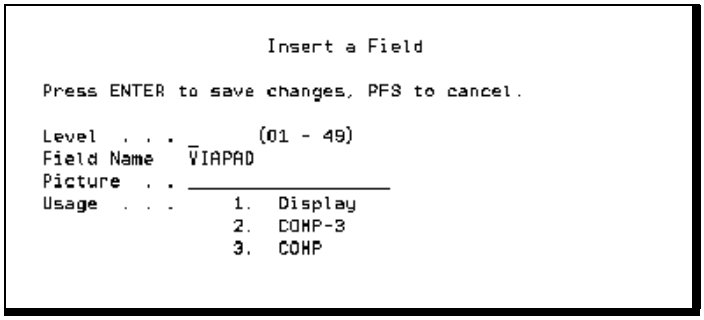
3 Press PF3 to return to the Plan Strategies screen.

To insert a field from the Structure Layout screen

Insert a field to increase the size of a related record so that its size matches the reformatted record.

1 Type `I` to select the data item you want to insert a field after on the Plan Strategies screen and press Enter. The Insert a Field pop-up displays (see Figure 53).

Figure 53 • Insert a Field Pop-up

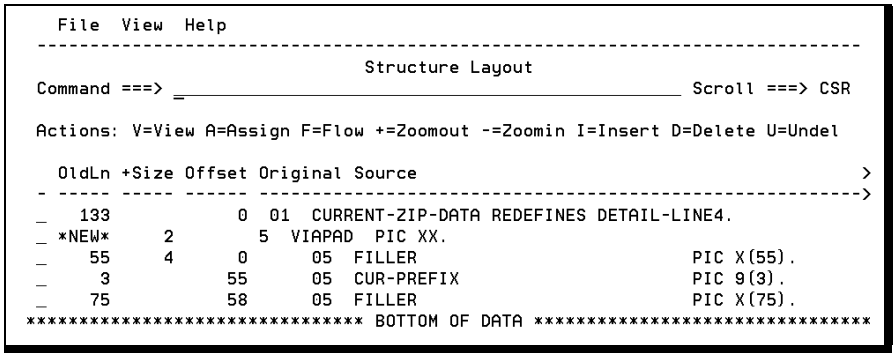


2 Specify the information for the field you want to insert as defined in this table:

Field	Description
Level	Record level for the inserted field.
Field name	Default field name is VIAPAD. Type over this value to change the name.
Picture	Valid picture clause for the field you are adding [i.e., 9999 or 9(9)].
Usage	Usage for the inserted field (display, packed, or binary).

3 Press Enter. The Structure Layout screen displays showing the new field (see Figure 54).

Figure 54 • Structure Layout Screen with Inserted Field



4 Press PF3 to return to the Plan Strategies screen.

Viewing Options on the Structure Layout Screen

The View pull-down on the Structure Layout screen provides view options for highlighting or for isolating impacted storage or impacted elementary items. You can also toggle between old and new values assigned to impacted data items. Screen actions control the levels of the selected items displayed, and access source and data flow information. View options are described in these two tables.

These are the View pull-down options:

To…	Use View pull-down option…
Highlight other items sharing storage	Highlight affected storage
Highlight only items with picture clauses	Highlight affected elementary
Turn off all highlighting	Reset highlighting
Display only impacted storage items	Show only affected storage
Display only impacted elementary items	Show only affected elementary
Reset screen to display all items	Show all
Toggle between old and new data item values	Toggle Old/New values

These are the screen actions:

To…	Use screen action…
Expand item to show all levels	+ (Zoomout)
Collapse sublevels of selected item	- (Zoomin)
Display the source view of the program where the data item resides	V (View)
Compare the selected data item with its synonyms	F (Flow)

Viewing Inserted and Deleted Items

The Layout Inserts/Deletes screen lists inserted fields and deleted elements you inserted or deleted using the I and D actions on the Structure Layout screen. Use this screen to delete or undelete listed items, and to access the Structure Layout screen to display the record structure.

To access and use the Layout Inserts/Deletes screen

1 Select View ▸ View Inserts/Deletes from the Plan Strategies screen and press Enter. The Layout Inserts/Deletes screen displays (see Figure 55).

Figure 55 • Layout Inserts/Deletes Screen

```
                          Layout Inserts/Deletes
Command ===> _                                              Scroll ===> CSR

Actions: L=Layout D=Delete U=Undelete

                                                                    1 of 12
  Dataname                        SrcLine Picture      Strategy
- ------------------------------- ------- ------------ --------
* CURRENT-ZIP-DATA                *       *            *
  VIAPAD                          153     9(9)         INSERT
* FINAL-CNT                       *       *            *
_   TOTAL-YTD-INT                 224     9(12)V99     DELETE
* MAST-RPT                        *       *            *
_   MAST-RPT                      51      GROUP(133)   DELETE
* TOTAL-PRT                       *       *            *
    TOTAL-PRT                     196     GROUP(133)   DELETE
_   PRT-TOTAL-AMT                 205     999999999999 DELETE
_   PRT-TOTAL-YTD-INT             209     999999999999 DELETE
* ZIP-TOTALS                      *       *            *
    ZIP-YTD-INT                   219     9(10)V99     DELETE
******************************** BOTTOM OF DATA ********************************
```

2 Review the information or use one of these actions:

To…	Do this…
Display record structure of selected item on Structure Layout screen	Use the L action to select the element.
Delete selected inserted field	Use the D action to select the inserted field you want to delete.
Undelete an deleted element	Use the U action to select the deleted element you want to undelete.

3 Press PF3 to save changes and return to the Plan Strategies screen.

Or

Select File and choose one of these options:

To…	Use this option…
Save changes and keep working on the Layout Inserts/Deletes screen	Save and continue
Save changes and return to the Plan Strategies screen	Exit

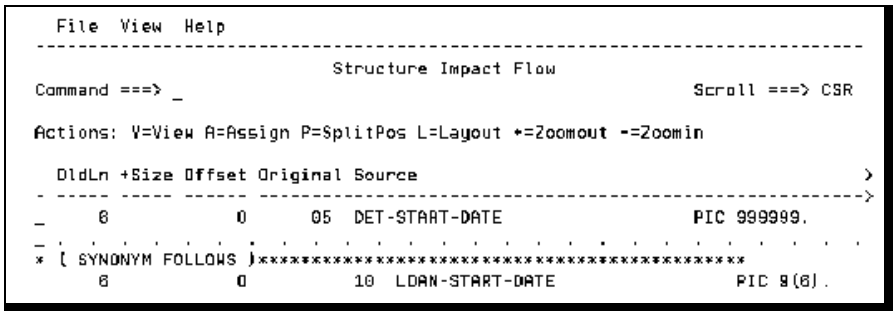
Accessing Data Flow Information

Use the Structure Impact Flow screen to compare the selected data item with records it moves to or from (synonyms). Use this screen to assign conversion strategies or to access the Structure Layout screen to review record length and redefines.

To select a data item and view its synonyms

1 Type `F` on the Plan Strategies screen and press Enter. The Structure Impact Flow screen displays (see Figure 56).

Figure 56 • Structure Impact Flow Screen



2 Review the information.

Or

Type `A` to assign a conversion strategy (see "Assigning AutoChange Strategies to Data Items" on page 78).

3 Press PF3 to return to the Plan Strategies screen.

Viewing Options on the Structure Impact Flow Screen

Use the View options on the View pull-down to position the split line and toggle the display between old and new values assigned to impacted data items. Screen actions control the levels of the selected items displayed and access source and layout information.

These are the View pull-down options:

To…	Use View pull-down option…
Position split line	Set Split Position
Toggle between old and new data item values	Toggle Old/New values

These are the screen actions:

To…	Use screen action…
Display source view of program where data item resides	V (View)
Position split line	P (SplitPos)
Display record structure of selected item on Structure Layout screen	L (Layout)
Expand item to show all levels	+ (Zoomout)
Collapse sublevels of selected item	- (Zoomin)

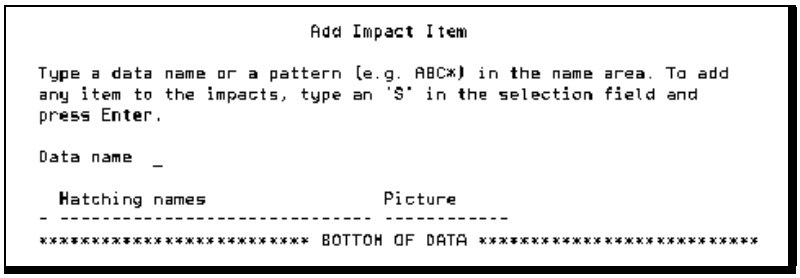
Adding Impacted Data Items

If you discover a data item missing from the impacted data item list, add the data item using the Plan Strategies screen.

To add an impacted data item

1 Select Edit ▸ Add impact item from the Plan Strategies screen and press Enter. The Add Impact Item pop-up displays (see Figure 57).

Figure 57 • Add Impact Item Pop-up



2 Type the data item name or the pattern (for example, *yy*) in the Data name field and press Enter. The Matching names column lists eligible program datanames.

3 Select the data items to add to the impacted list.

4 Press Enter to return to the Plan Strategies screen. Added data items appear in the impacted data item list.

Specifying Propagation Options

You must assign conversion strategies to all impacted data items in the conversion set before applying changes to the source. ASG recommends you assign conversion strategies to data items in copybooks first, so the strategies can be propagated to related data items in the conversion set. The letter C displays in the RCUFBI column on the Plan Strategies screen to indicate data items within copybooks.

Propagating a strategy copies the strategy assigned to a data item to all related data items within the conversion set. You can elect to propagate each strategy as it is assigned, or you can assign multiple strategies and propagate them together.

You can specify options to control propagation targets and levels. If you propagate strategies as you assign them, specify the propagation options before you assign the strategies.

Note:

Propagation does not override manually assigned strategies.

Specifying Different Propagation Level Results

This example illustrates the results of specifying different propagation levels in the Propagation levels field on the Options - Strategy Propagation pop-up:

```
77   DATE1 PIC 9(6)
77   DATE2 PIC 9(6)
77   DATE3 PIC 9(6)
77   DATE4 PIC 9(6)
MOVE DATE1 TO DATE2.
MOVE DATE2 TO DATE3.
MOVE DATE3 TO DATE4.
```

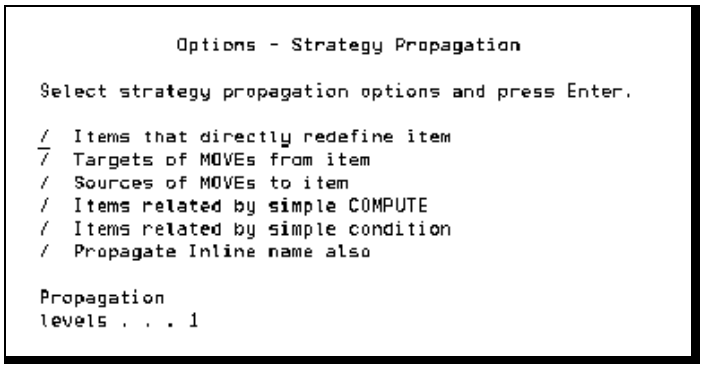
If you assign and propagate a conversion strategy to DATE1:

- Typing 1 in the Propagation levels field also assigns the strategy to DATE2.
- Typing 2 in the Propagation levels field also assigns the strategy to DATE3.
- Typing 0 in the Propagation levels field assigns the strategy to all levels. In this example, to DATE2, DATE3, and DATE4 as well as to DATE1.

To specify propagation options

1 Select Options ▸ Strategy Propagation options from the Plan Strategies screen and press Enter. The Options - Strategy Propagation pop-up displays (see Figure 58).

Figure 58 • Options - Strategy Propagation Pop-up



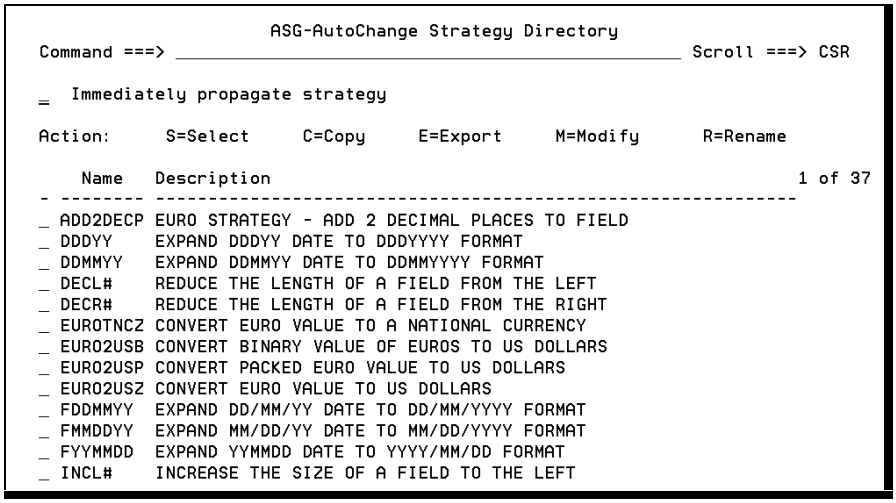
2 Select propagation options and specify propagation levels.

3 Press Enter to save the options and return to the Plan Strategies screen.

To propagate a strategy when assigning an AutoChange strategy

1 On the Plan Strategies screen, type `A` to assign the AutoChange strategy and press Enter. The ASG-AutoChange Strategy Directory screen displays (see Figure 59).

Figure 59 • ASG-AutoChange Strategy Directory Screen



2 Select the Immediately propagate strategy field when you select the AutoChange strategy.

3 Press Enter to propagate the strategy and return to the Plan Strategies screen.

To propagate a strategy not propagated from the Assign Strategies pop-up

1 Type `P` on the Plan Strategies screen to propagate the assigned items and press Enter.

Or

Use a selection method on the Edit pull-down to select assigned strategies to propagate.

2 Select Edit ▸ Propagate strategy and press Enter.

Assigning AutoChange Strategies to Data Items

Assign AutoChange strategies to data items from the Plan Strategies screen, the Structure Impact Flow screen, or the Structure Layout screen by selecting an available strategy from the list on the Assign Strategies pop-up. You can also propagate AutoChange strategies to related data items.

Note:

To enter an Inline strategy on the Plan Strategies screen, use the procedure described in "Assigning Inline Strategies to Data Items" on page 80.

To assign an AutoChange strategy

1 Select one of these options:

- Access the Plan Strategies screen, the Structure Impact Flow screen, or the Structure Layout screen. Type `A` to select the data items for strategy assignment and press Enter. The AutoChange Strategy Directory screen displays.
- Access the Plan Strategies screen. Type `S` to select data items for strategy assignment. Press Enter to highlight the selected items
- Select one of the options on the Edit pull-down to select data items for strategy assignment. Press Enter to highlight the selected items.

2 Select Edit ▸ Assign strategy and press Enter. The ASG-AutoChange Strategy Directory screen displays.

3 Select a strategy to assign to the selected data items.

4 Select the Immediately propagate strategy option to propagate (copy) the strategy to related data items.

5 Press Enter to assign the strategy and return to the screen from which you accessed the ASG-AutoChange Strategy Directory screen.

To assign a conversion strategy directly in the Strategy column on the Plan Strategies screen

1 Navigate to the Strategy column on the line that contains the data item to be assigned a conversion strategy.

2 Type the strategy to assign to the data item and press Enter. If you are typing over an existing strategy, you must completely type over the existing strategy.

3 Press Enter.

To assign the INCR# or the DECR# strategy to a data item

1 Select the data items on the Plan Strategies screen to apply the INCR# or the DECR# starter set strategy to and press Enter.

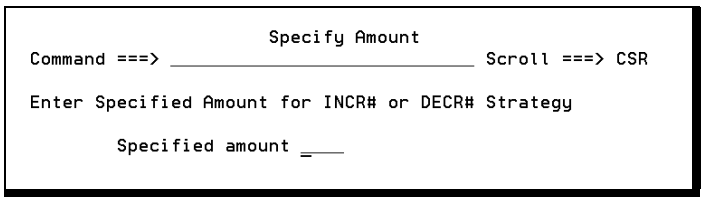
Note:

ASG recommends that you do not assign allowable pictures to the INCR# and DECR# starter set strategies.

2 Type `A` and press Enter to display the ASG-AutoChange Strategy Directory screen.

3 Select the INCR# or the DECR# strategy from the AutoChange strategies listed and press Enter. The Specify Amount pop-up displays (see Figure 60).

Figure 60 • AutoChange Specify Amount Pop-up



4 Type the amount of the increase or the decrease in length of the data item. For example, if the data item length is currently 6 and you want to increase it to 8, you would enter 2 in the Specified amount field.

5 Press Enter to save and return to the Plan Strategies screen. The strategy is assigned to the data item with the amount you entered (INCR2 in the preceding example).

Assigning Inline Strategies to Data Items

Designate an AutoChange strategy that describes the effect of the Inline strategy when you assign Inline strategies. AutoChange uses this definition to determine the net effect of the change and to check for conflicts.

You cannot assign an Inline strategy to data items that have these AutoChange strategies assigned:

- KEEP
- KEEPF
- NULL

Use the procedure "To assign an Inline strategy to selected data items" on page 80 to enter an Inline strategy, not the Strategy column on the Plan Strategies screen.

Note:

You cannot generate Inline procedural code within copybooks. That is, AutoChange does not support changes to the use of that field within that copybook if the program Procedure Division contains a COPY statement, and if a data item used in the copybook has an Inline strategy assigned to it.

To assign an Inline strategy to selected data items

1 From the Plan Strategies screen, assign an AutoChange strategy to an item that describes the effect of the Inline strategy you want to assign (see "Assigning AutoChange Strategies to Data Items" on page 78).

   Assign any strategy other than KEEP, KEEPF, or NULL.

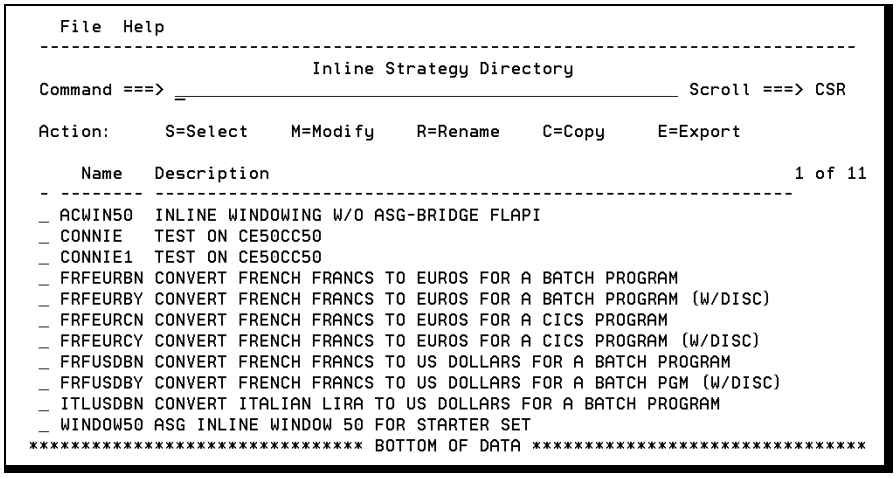
2 Select Edit ▸ Inline Strategies.

   Or

   Type `I`.

Press Enter. The Inline Strategy Directory screen displays (see Figure 61).

Figure 61 • Inline Strategy Directory Screen



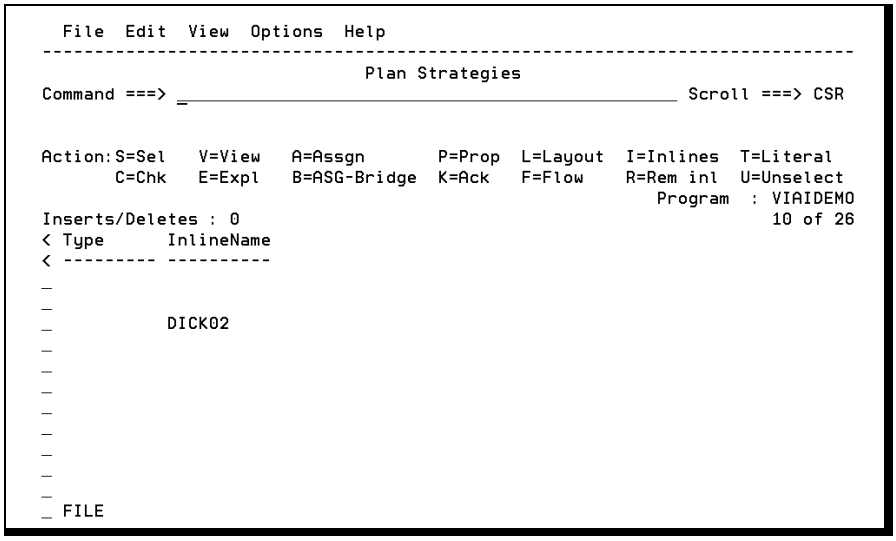
```
  File  Help
-------------------------------------------------------------------------------
                        Inline Strategy Directory
Command ===> _____________________________________________ Scroll ===> CSR

Action:     S=Select    M=Modify    R=Rename    C=Copy     E=Export

    Name   Description                                              1 of 11
- -------- ------------------------------------------------------------
_ ACWIN50  INLINE WINDOWING W/O ASG-BRIDGE FLAPI
_ CONNIE   TEST ON CE50CC50
_ CONNIE1  TEST ON CE50CC50
_ FRFEURBN CONVERT FRENCH FRANCS TO EUROS FOR A BATCH PROGRAM
_ FRFEURBY CONVERT FRENCH FRANCS TO EUROS FOR A BATCH PROGRAM (W/DISC)
_ FRFEURCN CONVERT FRENCH FRANCS TO EUROS FOR A CICS PROGRAM
_ FRFEURCY CONVERT FRENCH FRANCS TO EUROS FOR A CICS PROGRAM (W/DISC)
_ FRFUSDBN CONVERT FRENCH FRANCS TO US DOLLARS FOR A BATCH PROGRAM
_ FRFUSDBY CONVERT FRENCH FRANCS TO US DOLLARS FOR A BATCH PGM (W/DISC)
_ ITLUSDBN CONVERT ITALIAN LIRA TO US DOLLARS FOR A BATCH PROGRAM
_ WINDOW50 ASG INLINE WINDOW 50 FOR STARTER SET
****************************** BOTTOM OF DATA ********************************
```

3 Type `S` to select an Inline strategy and press Enter. The Plan Strategies screen displays. The RCUFBI column displays an `I`, indicating an Inline strategy is assigned. Scroll to the right to see the assigned Inline strategy name in the InlineName column (see Figure 62).

Figure 62 • Plan Strategies Screen (right side)



```
  File  Edit  View  Options  Help
-------------------------------------------------------------------------------
                              Plan Strategies
Command ===> _____________________________________________ Scroll ===> CSR


Action: S=Sel   V=View   A=Assgn       P=Prop  L=Layout  I=Inlines  T=Literal
        C=Chk   E=Expl   B=ASG-Bridge  K=Ack   F=Flow    R=Rem inl  U=Unselect
                                                    Program  : VIAIDEMO
Inserts/Deletes : 0                                           10 of 26
< Type      InlineName
< --------- ----------
_
_
_           DICK02
_
_
_
_
_
_
_
_
_ FILE
```

To remove an Inline strategy from a data item

1. Type `S` on the Plan Strategies screen to select the items with the Inline strategies you want to remove and press Enter.

2. Select the Edit ▸ Remove Inlines to remove the Inline strategies from all the selected data items.

   Or

   Type `R` to select one or more data items. Press Enter to remove the Inline strategy from the data items.

   The `I` is removed from the RCUFBI column and the name of the assigned Inline strategy is removed from the InlineName column.

To view literals

1. Type `S` on the Plan Strategies screen to select the data items that you want to check for literals and press Enter.

2. Select Edit ▸ Check for Literal.

   Or

   Type `T` to select the data item(s).

   Press Enter.

3. If the data item contains literals, the source view displays listing the literals that need changed. Press Enter to move to the next literal in the view.

4. Press PF3 to save and exit.

   Or

   Type `Cancel` on the command line and press Enter to exit without saving.

Saving or Canceling Strategy Assignments

AutoChange provides you with save and cancel options when you are working on the Plan Strategies screen. Save your work periodically and return to the Plan Strategies screen to continue planning tasks or to cancel any work completed since the last save.

To save or to cancel work on the Plan Strategies screen, follow this step:

- Select File from the AutoChange Primary screen and choose from these pull-down options:

To…	Use pull-down option…
Save work and keep working on plan strategies.	Save and continue
Save your work and return to Conversion Set screen.	Save and exit
Cancel your work since the last save and return to Conversion Set screen.	Cancel and exit

Or

Press PF3 and choose one of these pop-up options on the Save Work pop-up:

To…	Choose option…
Save your work and keep working on Plan Strategies screen.	Save and continue
Save your work and return to the Conversion Set screen or to the Insight Source View screen.	Save and exit
Cancel your work since the last save and return to the Conversion Set screen or to the Insight Source View screen.	Cancel and exit
Neither save or cancel work. Return to the Plan Strategies screen to continue working.	Continue working

Importing Strategy Assignments from Other Conversion Sets

You can import strategy assignments from programs and copybooks in other conversion sets. For example, you can assign strategies once for copybooks used in multiple programs, then import the strategy assignments when needed for other conversion sets.

Note:

You cannot import Inline strategy assignments using this method. If you import assignments for Inline strategies, only the associated AutoChange strategy assignment is imported.

Understanding Import Logic

The strategy import feature uses these two basic algorithms:

- Copy strategies to the matching data item name, matching all qualifiers based on the selection of the Match All Levels parameters on the Import Member Strategies screen.
- Copy strategies to the items at the same relative position in the copybook.

  Use this algorithm only if the source is staged from the backup library. The source may differ from when the strategies were assigned if they were staged from another location, and some strategy assignments might no longer be appropriate. This algorithm is more effective in some situations since it works independently of the data item name.

To import strategy assignments

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

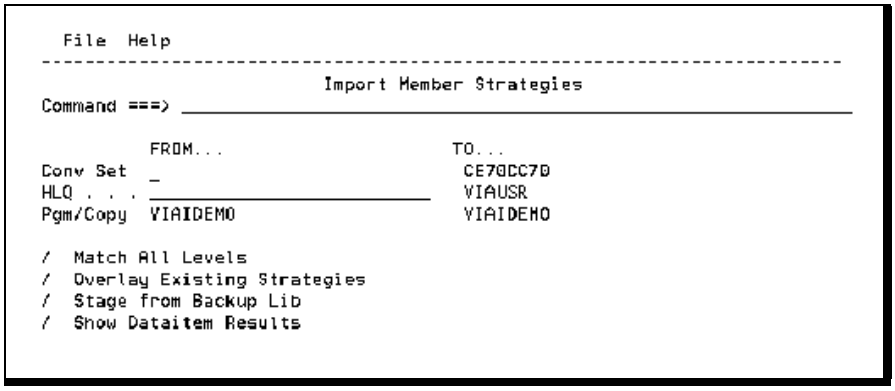
If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Type `S` to select the program or the copybook that you want to import conversion strategies into and press Enter to highlight the item.

3 Select Actions ▸ Import Strategies and press Enter. The Import Member Strategies pop-up displays (see Figure 63).

Figure 63 • Import Member Strategies Pop-up



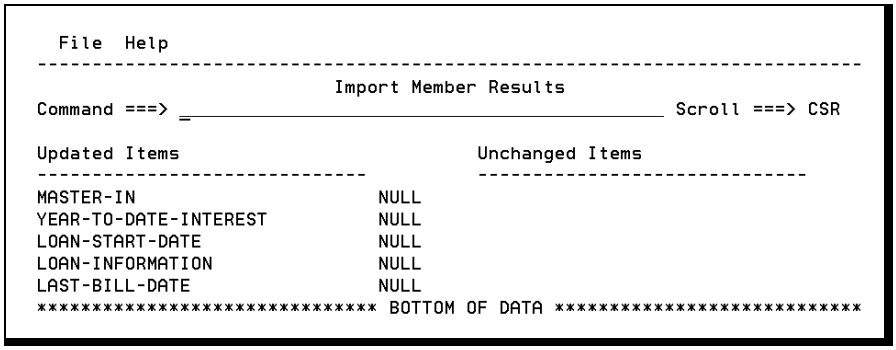
4 Type the conversion set name, high-level qualifier, and the program or the copybook name in the FROM column to designate the conversion set and the program or the copybook to import from.

5 Specify these import options:

Import Option	Description
Match All Levels	Imports member strategy only if elementary data items match exactly at all levels of the qualification hierarchy. **Note:** Not applicable if staging from backup libraries.
Overlay Existing Strategies	Overwrite existing strategies with imported assignments.
Stage from Backup Lib	Stages imported member from backup library (recommended). **Note:** Do not select this option if you want to bypass staging.
Show Dataitem Results	Shows updated data items.

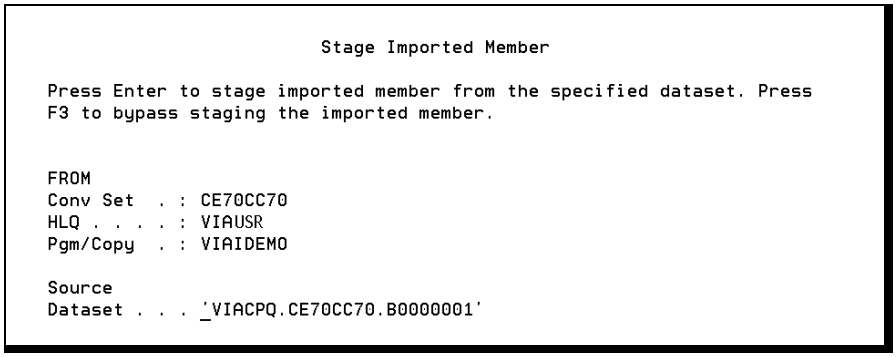
6 Press Enter. If you specified the Stagefrom Backup Lib and Show Dataitem Results options, the Import Member Results pop-up displays showing updated and unchanged items (see Figure 64).

Figure 64 • Import Member Results Pop-up



7 Press PF3 to return to the Import Member Strategies pop-up. If you did not specify the Stage from Backup Lib option, the Stage Imported Member pop-up displays (see Figure 65).

Figure 65 • Stage Imported Member Pop-up



8 Specify the dataset to stage from and press Enter.

Or

Press PF3 to bypass staging.

The Import Member Results pop-up displays, listing updated and unchanged items.

9 Press PF3 to return to the Import Member Strategies pop-up.

Unfound Copybook Items

Unfound items keep the Conversion Set screen from displaying a plan date for a planned copybook. Assign strategies to all impacted data items in the programs and copybooks to complete the plan phase of the conversion. Data items in copybooks must be used or found by at least one program in the conversion set. If a copybook contains data items not found by any programs in the conversion set, you must remove those items from the impacted data item list.

AutoChange lists data items not found by any program in the conversion set on the Unfound Copybook Items screen. Datanames might be unique to a particular program because of copy replacing. For this reason, do not remove the unfound items listed on this screen until you have planned all programs using the copybook containing the unfound data items.

To check for and remove unfound copybook items

1. Select View ▸ View unfound items from the Plan Strategies screen and press Enter. The Unfound Copybook Items screen displays.

2. Type `R` next to items to remove and press Enter. The items are removed.

3. Press PF3 to return to the Plan Strategies screen.

Locating and Resolving Data Item Conflicts

Conversion strategy conflicts occur if different strategies are assigned to related data items, or if a data item is missing from the impacted data item list.

Note:

ASG recommends you assign conversion strategies to all impacted data items in the conversion set before checking for conflicts.

Some conflicts might be unresolvable and may not need to be resolved for a successful conversion. Unresolvable conflicts occur when a value such as a date is moved, for example:

```
MOVE DATE1 TO WORKDATE.
MOVE DATE2 TO WORKDATE.
```

Assume that the `DATE1` date format is YYMMDD, and the `DATE2` date format is MMDDYY. This conflict cannot be resolved, but does not affect processing because the data is not used concurrently.

Unresolved conflicts do not prevent an AutoChange conversion. However, you should examine all conflicts to determine any impact before proceeding with conversion.

To locate conversion strategy conflicts, follow this step:

- Perform one of these tasks:
  - Type `C` on the Plan Strategies screen to select the data items to check for conflicts and press Enter.
  - Type `S` and press Enter.
  - Select Edit ▸ Check for conflicts and press Enter.

If conflicts are found, the word `YES` displays in the Conflict column for the corresponding data items and a message displays at the top left of the screen showing how many conflicts are detected. If no conflicts are found, a message displays indicating that 0 conflicts detected.

Note:

Conflicting items are marked only for the current session in the Plan Facility. If you leave the Plan Facility before resolving all conflicts, you must repeat conflict checking to identify remaining unresolved conflicts upon return to the Plan Facility.

To resolve a conflict

1 Type `E` on the Plan Strategies screen to select a data item to determine the reason for the conflict and press Enter. The Conflict Detail View screen displays (see Figure 66).

Figure 66 • Conflict Detail View Screen

```
  File  Help
------------------------------------------------------------------------------
                          Conflict Detail View
Command ===> _____________________________________________ Scroll ===> CSR

Actions:I=Include as Impact V=View A=Assign L=Layout F=Flow

   Name                          Picture       NewLen  Strategy  InlineNm  C
_  DETAIL-LINE1                  GROUP(135)       137  NULL                C

  Name                         Picture      NewLen Strategy ConflictReason C>
- ---------------------------- ------------ ------ -------- -------------- ->
_ MASTER-IN                    GROUP(163)      167 NULL     Size mismatch  C
******************************** BOTTOM OF DATA ********************************
```

2 Research the conflict using these line command actions to view source, layout, and data flow information:

To view…	Use this action…
Data item in context of program source code	V (View)
Structure layout of the program where the data item resides	L (Layout)
Comparison of the data item to items it moves data to or from	F (Flow)

3 Use one of these actions to resolve the conflict:

To…	Use this action…
Include the data item identified as missing from the impacted data item list.	I (Include as Impact)
Assign conversion strategy to any data item on the screen.	A (Assign)

Note:
Some conflicts may be unresolvable and some may not need to be resolved.

4 Press PF3 to return to the Plan Strategies screen. The Conflict column does not display the YES indication after the conflict is resolved.

Acknowledging Conflicts

A program could have many conflicts. You may find it difficult to track known conflicts that do not need resolved or that need further research. Mark these conflicts acknowledged.

To identify conflicts that have been examined, but not resolved, follow this step:

- Type `K` on the Plan Strategies screen to select the conflict items to acknowledge and press Enter. `ACK` displays in the Conflict column.

Note:
Acknowledged items are marked only for the current Plan Facility. If you leave the Plan Facility before resolving all conflicts, you must check for and acknowledge any remaining conflicts when returning to the Plan Facility.

Designating a Bridge Record

Designate a Bridge Record when the record contains data items with assigned strategies that include Bridge Rules. (See "Creating AutoChange Strategies" on page 97 for details on Bridge Rule assignment.)

AutoChange requests environment information and a Bridge Definition name to associate with the record when you designate a Bridge Record. The information AutoChange requests depends on the program environment where the Bridge Record resides. AutoChange uses this information to insert the Bridge Initialization CALL statement in the program where the Bridge Record resides when the strategy is applied.

This is the information requested for different environment types:

For this environment…	Specify Bridge Definition name and…	Required/Optional
CICS	FCTNAME	Required
	SYSID	Required
	Related Field (COBOL field containing dynamic FCT name)	Optional
CICS DL/I	Bridge PCR name	Required
IMS	No additional specifications required	N/A
File (Sequential	DDNAME associated with this file	Required
or VSAM)	Related Field (FD name)	Optional
IDMS	SCR associated with the subschema name of the record (alphanumeric)	Required
	NEWVER (numeric)	Required
	SCHEMANM (alphanumeric schema name); scroll right to access this field	Required

Note:

You must designate a Bridge Definition name for all environments.

The Bridge Definition (see "Creating Bridge Definitions for Bridge" on page 117) contains any fields in the designated Bridge Record that have Bridge Rules assigned. You can send a definition to Bridge and from within Bridge. Then, you can generate a Bridge Routine to use with the converted program.

To designate a Bridge Record and Bridge initialization information

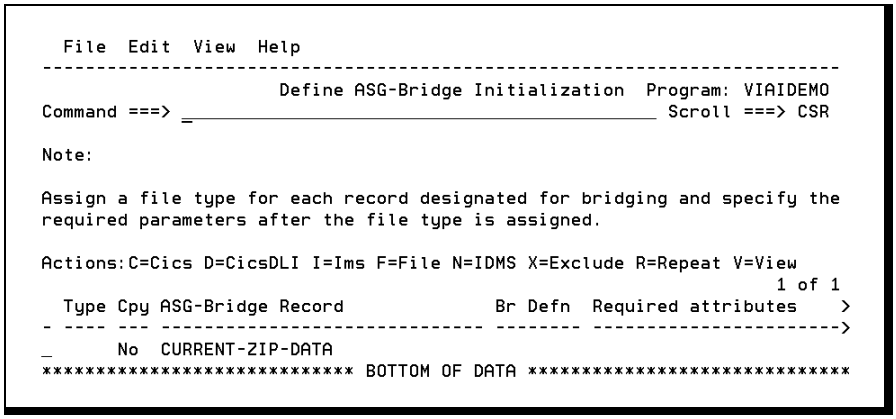
1 Type B on the Plan Strategies screen to select a data item within the record to bridge.

Or

Select File ▸ Bridge Initialization from the Apply Strategy screen.

Press Enter. The Define Bridge Initialization pop-up displays showing the record description (see Figure 67).

Figure 67 • Define Bridge Initialization Pop-up



2 Specify the program environment with the CICS, CICS DLI, IMS, File, or IDMS action in the line command line and press Enter. Fields for Bridge Definition name and attributes appear. (Scroll right for Related Field.)

3 Specify the Bridge Definition name and environment type attributes as described in the table on page 90.

Note:

You can specify the Bridge Definition Name and other attributes when you apply strategies. However, you must specify the environment type here.

To view a record in context of the program source code, follow this step:

- Type V and press Enter.

To repeat the record information

1. Type `R` in the line command line of the record you want to repeat and press Enter.
2. Press PF3 to save changes and return to the Plan Strategies screen. The letter `B` displays in the RCUFBI column at the 01 record level to mark it as a Bridge Record. The 01 record level item is added if it was not previously included in the impacted data item list.
3. Select File ▸ Cancel, then exit to cancel changes and return to the Plan Strategies screen.

Reviewing or Editing Bridge Record Information

If you need to review or edit information for an existing Bridge Record, you can access the Define Bridge Initialization screen from the View pull-down on the Plan Strategy screen. You can view all the Bridge Records designated in the current program and specify sort criteria to view the information sorted by Bridge Record, Bridge Definition, or Related Field.

To review or to edit Bridge Record information

1. Select View ▸ View Bridge Records from the Plan Strategies screen and press Enter. The Define Bridge Initialization pop-up displays.
2. Select View ▸ View all Bridge Records and press Enter. All Bridge Records designated in the current program display.
3. Review or edit Bridge Record information.
4. Press PF3 to save and return to the Plan Strategies screen.

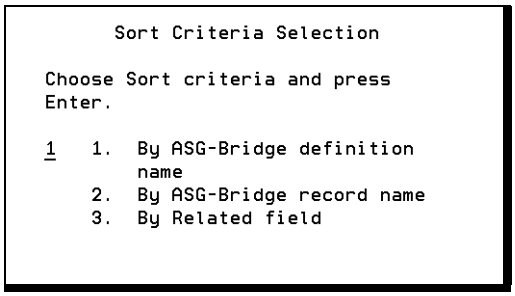
To delete Bridge Records

1. Type `X` on the Define Bridge Initialization pop-up to select the Bridge Records to delete and press Enter.
2. Press PF3 to return to the Plan Strategies screen. The B designation in the RCUFBI column is removed.

To specify sort criteria on the Define Bridge Initialization pop-up

1 Select View ▸ Sort by on the Define Bridge Initialization pop-up and press Enter. The Sort Criteria Selection pop-up displays (see Figure 68).

Figure 68 • Sort Criteria Selection Pop-up



2 Choose how you want the Bridge Records sorted and press Enter. The Define Bridge Initialization pop-up displays with the records sorted in the order specified.

11 Understanding and Creating Strategies

This chapter explains how to access and use the Plan Strategies screen and contains these sections:

Understanding AutoChange Strategies

Strategies identify how you need to modify data item formats. AutoChange allows you to use two strategies to change impacted data items: AutoChange strategies and Inline strategies. You can also specify existing Bridge Rules to use in conversions.

AutoChange is distributed with strategy starter sets that encompass most date formats that are used today, as well as formats for currency conversions. To use these strategies, first import the appropriate sets into the application (see "Importing AutoChange Starter Set Strategies" on page 18 for instructions). You can also create custom strategies.

An applied AutoChange strategy changes the code in the staging libraries copy of a program. An AutoChange strategy modifies the length of a data item, type of a data item, or both, by changing the data item field description in the program’s Data Division.

If you use ASG-Bridge, you can use the bridging rules that already exist in Bridge when you specify an AutoChange strategy (see the *ASG-Bridge User's Guide* for information about Bridge Rules). To use a Bridge Rule in a strategy, enter a Bridge Rule name when you specify the allowable picture information for the strategy. See "Adding Allowable Pictures and Assigning Bridge Rules" on page 98 for additional information.

Most AutoChange starter set strategies used in converting date formats and currency have associated Bridge Rules. These starter set strategies are compatible with AutoChange strategies. Use the Modify action on the View AutoChange Strategy screen or the AutoChange Strategy Directory screen to view associated Bridge Rules. See "Viewing or Modifying AutoChange Strategies" on page 104 for detailed instructions.

This guide also includes "Starter Set Strategies" on page 149, that includes a listing of the starter set strategies.

Understanding Inline Strategies

An applied Inline strategy modifies the length of a data item by changing the procedural code where the data item is referenced. You designate the code that an Inline strategy inserts. An Inline strategy can reverse the change, returning the field to its original definition.

For example, if you applied an Inline strategy to expand a two-digit date field to four digits it would first expand the field, use the expanded value in the appropriate program process, and then (if applicable) reverse the change and return the field to the original size.

When assigning Inline strategies, you must first designate a related AutoChange strategy. AutoChange uses that definition to determine the effect of the change and to check for conflicts.

Sample Inline Strategy for Year Conversion

This is a sample Inline strategy for a year conversion, with explanations of the components:

```
WORKING-STORAGE
01  OLD-DATE-FORMAT.
  05  ODF-MMDD    PIC XXXX.
  05  ODF-YY      PIC XX.
01  NEW-DATE-FORMAT.
  05  NDF-MMDD    PIC XXXX.
  05  NDF-CC      PIC XX.
  05  NDF-YY      PIC XX.
FORWARD-PROCEDURE
*
*    CHANGE OLD FORMAT DATE BACK TO NEW FORMAT
*    YEARS '00 THRU '30' ARE ASSUMED TO BE 20XX
*    ALL OTHERS ARE ASSUMED TO BE 19XX
*
  MOVE $IN TO OLD-DATE-FORMAT
  MOVE ODF-MMDD TO NDF-MMDD
```

```
  MOVE ODF-YY   TO NDF-YY
  IF NDF-YY < 31
      MOVE '20' TO NDF-CC
  ELSE
      MOVE '19' TO NDF-CC
  END-IF
  MOVE NEW-DATE-FORMAT TO $OUT
REVERSE-PROCEDURE
*
*    CHANGE NEW FORMAT DATE BACK TO OLD FORMAT
*
  MOVE $OUT TO NEW-DATE-FORMAT
  MOVE NDF-MMDD TO ODF-MMDD
  MOVE NDF-YY   TO ODF-YY
  MOVE OLD-DATE-FORMAT TO $IN
```

where:

Parameter Value	Description
Working Storage	Specifies the format definitions to be used in the strategy.
Forward Procedure	Specifies the instructions for reformatting the data item.
Reverse Procedure	Specifies the reverse convert logic to reformat the data item to its original definition.
$IN	Specifies the input data item.
$OUT	Specifies the field name (this is created by AutoChange).

Creating AutoChange Strategies

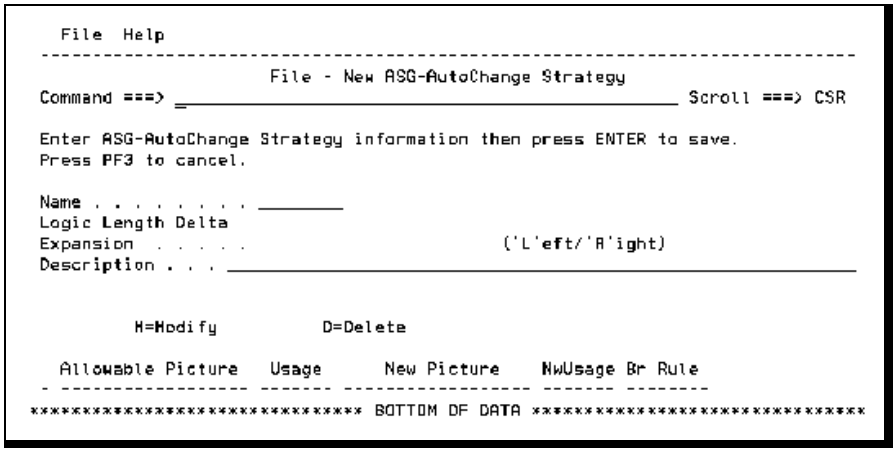
To create AutoChange strategies

1 Select File ▸ New from the AutoChange Primary screen and press Enter. The File-New pop-up displays (see Figure 69).

Figure 69 • File - New Pop-up

2 Select the Strategy option and press Enter. The File - New ASG-AutoChange Strategy screen displays (see Figure 70).

Figure 70 • File - New ASG-AutoChange Strategy Screen



3 Type a name and description for the strategy and complete these fields:

Field	Entry
Logic Length Delta	Type a logical length delta. This number indicates the number of digits of difference between the old and new picture definitions. For example, if the picture definition was PIC 9(6) and is now PIC 9(8), you would enter `2`. If the picture definition was PIC 9(6) COMP and is now PIC 9(8) COMP, the logical length delta would also be `2` because this value represents actual digits rather than bytes.
Expansion	Type `L` or `R` to indicate the direction of the picture expansion.

4 Press Enter to save and PF3 to exit and return to the File - New pop-up.

Adding Allowable Pictures and Assigning Bridge Rules

An allowable picture is the data item picture-clause definition that you apply a strategy to. When you add an allowable picture to a strategy, you define the fields valid for the strategy. If you use Bridge, you can include an existing Bridge Rule as part of the allowable picture definition. AutoChange displays an error message if you attempt to assign the strategy to a data item that does not fit the stated picture.

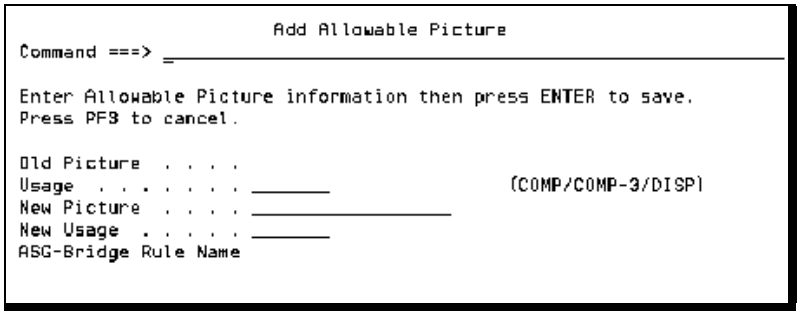
Specifying an allowable picture is optional. If you add an allowable picture, you must enter an Old Picture value. Other values are optional, but you must provide all information if you are assigning a Bridge Rule. This procedure provides additional information about the allowable picture parameters.

To add an allowable picture to an AutoChange strategy

1 Access the File - New AutoChange Strategy screen (see "To create AutoChange strategies" on page 97).

2 Select File ▸ Add Allowable Picture and press Enter. The Add Allowable Picture pop-up displays (see Figure 71).

Figure 71 • Add Allowable Picture Pop-up

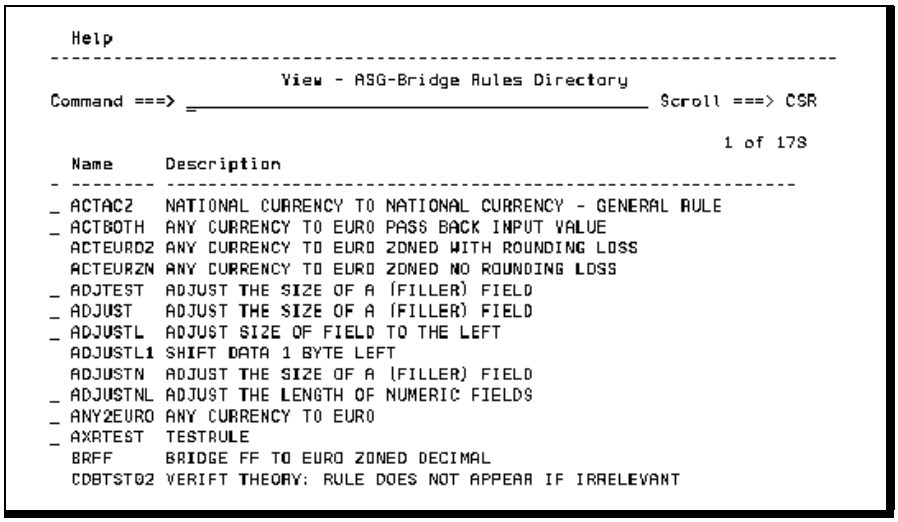


3 Complete these fields to define the allowable picture for your strategy:

Field	Entry
Old Picture	Required. Statement of the valid picture clause for this strategy. Enter `ANY` to make any picture clause valid.
Usage	Usage of a field where the strategy is applied (computational, packed computational, or display). If you leave this field empty, any usage is accepted.
New Picture	Statement of the picture clause used when this strategy is applied. If you leave this field empty, AutoChange changes the Old Picture definition according to the logical length delta provided on the New AutoChange Strategy screen.

Field	Entry
New Usage	Usage for the field when this strategy is applied.
ASG-Rule Name	Name of the applied Bridge Rule when this strategy is used. Type a Bridge Rule name or select File ▸ Bridge Rule Name List and press Enter. The View - ASG Bridge Rule Directory pop-up displays (see Figure 72). Type S to select a Bridge Rule name and press Enter. The Bridge Rule name displays in the Bridge Rule Name field. If you specify a Bridge Rule, you must specify old and new pictures and usage because Bridge Rules are usage-dependent.

Figure 72 • View - ASG Bridge Rules Directory Pop-up



4 Press Enter to save.

5 Press PF3 to return to the File - New AutoChange Strategy screen. Press PF3 again to return to the AutoChange Primary screen.

Designating Compatible Strategies

Compatible strategies specify similar change methods. Designate some strategies as compatible to reduce the number of conflict notifications that occur in AutoChange processing.

When checking for conflicts, AutoChange notes conflicts if different strategies are assigned to similar data items, even though the strategies might be valid as assigned. For example, a strategy to expand a *YY* field would probably also work to expand a *YYMM* field, since the expansion would be in the same direction. If you do not want to see conflict notifications in such cases, you can designate the strategies as compatible.

Note:

Use compatible strategy designations with caution, because defining numerous compatible strategies can keep you from recognizing valid conflicts.

To select compatible strategies

1 Access the File - New AutoChange Strategy screen (see "To create AutoChange strategies" on page 97).

2 Select File ▸ Select Compatible Strategy and press Enter. The View/Select Compatible Strategy screen displays (see Figure 73).

Figure 73 • View/Select Compatible Strategy Screen

```
  Help
--------------------------------------------------------------------------------
                      View/Select Compatible Strategy
Command ===> _____________________________________________ Scroll ===> CSR
ASG7657I           0 STRATEGY(S) SELECTED.
Select the strategy then press ENTER to confirm the selection.

From :
Strategy Name  . . :

To :

  Str Name Description                                                 1 of 39
- -------- ------------------------------------------------------------
_ COMEBACK ANOTHER TEST
_ DDDYY    EXPAND DDDYY DATE TO DDDYYYY FORMAT
_ DDMMYY   EXPAND DDMMYY DATE TO DDMMYYYY FORMAT
_ DECL#    REDUCE THE LENGTH OF A FIELD FROM THE LEFT
_ DECR#    REDUCE THE LENGTH OF A FIELD FROM THE RIGHT
_ FDDMMYY  EXPAND DD/MM/YY DATE TO DD/MM/YYYY FORMAT
_ FMMDDYY  EXPAND MM/DD/YY DATE TO MM/DD/YYYY FORMAT
_ FYYMMDD  EXPAND YYMMDD DATE TO YYYY/MM/DD FORMAT
_ INCL#    INCREASE THE SIZE OF A FIELD TO THE LEFT
_ INCR#    INCREASE THE SIZE OF A FIELD TO THE RIGHT
```

3 Type `S` next to the names of the strategies that are compatible with the new conversion strategy. Press Enter to save.

4 Press PF3 to return to the File - New AutoChange Strategy screen.

Creating Inline Strategies

Inline strategies change procedural code where the impacted field is used. These are the two methods for executing Inline strategies provided by AutoChange:

- The Inline method inserts the new code where it is needed.
- The Perform method creates a paragraph with your created code, then inserts a PERFORM statement referencing that paragraph where it is needed within the code.

Note:

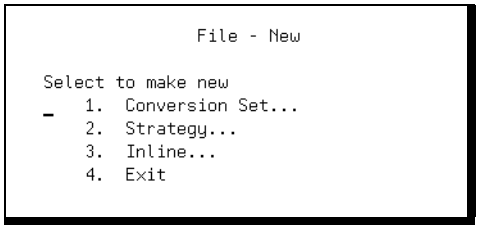
The Perform method maximizes reuse of code and uses less memory.

To create an Inline strategy

1 Access the File - New AutoChange Strategy screen (see "To create AutoChange strategies" on page 97).

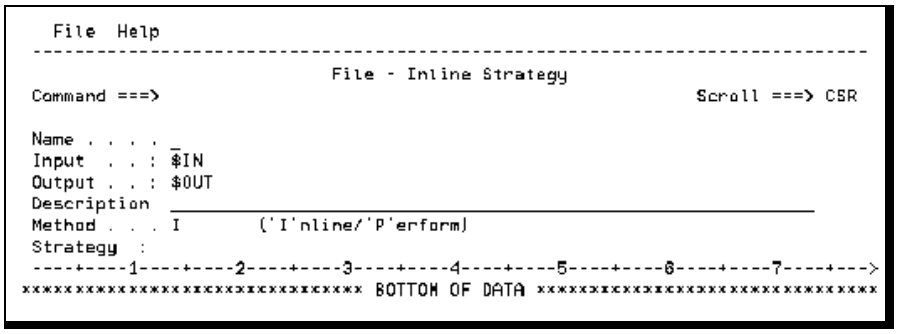
2 Select File ▸ New and press Enter. The File-New pop-up displays (see Figure 74).

Figure 74 • File - New Pop-up



3 Choose Inline and press Enter. The File - Inline Strategy screen displays (see Figure 75).

Figure 75 • File - Inline Strategy Screen

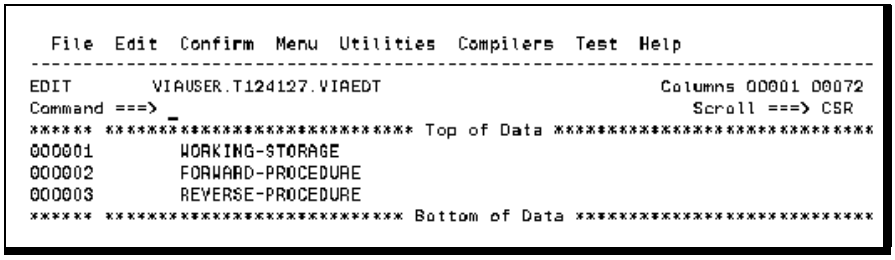


4 Type the strategy name, description, and application method described in this table:

Method Code	Description
I=Inline method	Insert the new code where needed.
P=Perform method	Use a PERFORM statement to execute the new code.

5 Select File ▸ Create/Edit Source and press Enter. An edit screen displays (see Figure 76).

Figure 76 • Create/Edit Source Screen



6 Complete the COBOL code for the displayed sections defined in this table:

Section	Create code to define...
WORKING-STORAGE	Format definitions of data items used in conversion.
FORWARD-PROCEDURE	Procedure for altering data item formatting during processing.
REVERSE-PROCEDURE	Procedure for returning data item formats to original definition.

Note:

See "Sample Inline Strategy for Year Conversion" on page 96 for an example of Inline strategy coding.

7 Press PF3 to save and return to the File - Inline Strategy screen.

8 Choose one of these options:

- Press PF3 to save and exit.
- Select File ▸ Save and press Enter.
- To exit without saving, select File ▸ Cancel, then Exit.

Viewing or Modifying AutoChange Strategies

View and modify strategies on the View - AutoChange Strategy screen or the AutoChange Strategy Directory screen.

To view or to modify AutoChange strategies

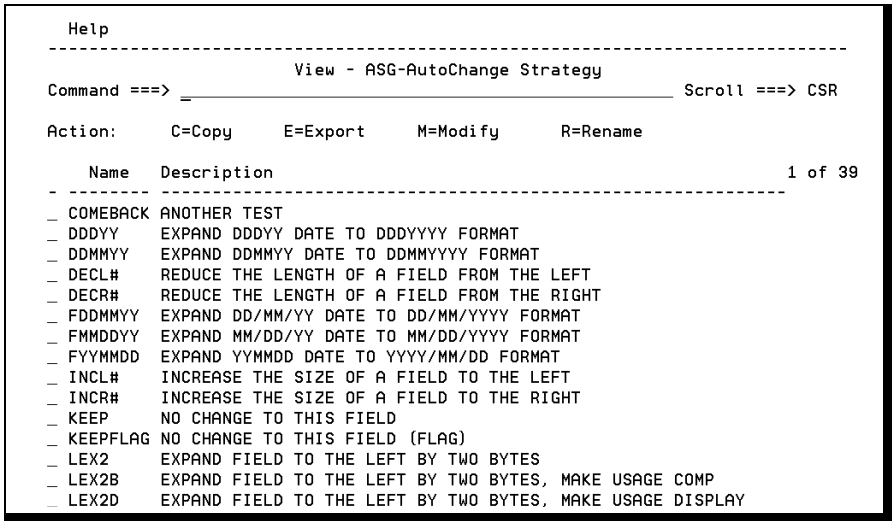
1 Access the File - New AutoChange Strategy screen (see "To create AutoChange strategies" on page 97).

2 Select View ▸ Strategy Directory and press Enter. The View - ASG-AutoChange Strategy screen displays (see Figure 77).

Or

Type `A` to select data and press Enter. The ASG-AutoChange Strategy Directory screen displays (see Figure 78 on page 105).

Figure 77 • View - ASG-AutoChange Strategy Screen



```
  Help
------------------------------------------------------------------------------
                        View - ASG-AutoChange Strategy
Command ===> _____________________________________________ Scroll ===> CSR

Action:     C=Copy     E=Export     M=Modify      R=Rename

    Name   Description                                              1 of 39
- -------- ------------------------------------------------------------
_ COMEBACK ANOTHER TEST
_ DDDYY    EXPAND DDDYY DATE TO DDDYYYY FORMAT
_ DDMMYY   EXPAND DDMMYY DATE TO DDMMYYYY FORMAT
_ DECL#    REDUCE THE LENGTH OF A FIELD FROM THE LEFT
_ DECR#    REDUCE THE LENGTH OF A FIELD FROM THE RIGHT
_ FDDMMYY  EXPAND DD/MM/YY DATE TO DD/MM/YYYY FORMAT
_ FMMDDYY  EXPAND MM/DD/YY DATE TO MM/DD/YYYY FORMAT
_ FYYMMDD  EXPAND YYMMDD DATE TO YYYY/MM/DD FORMAT
_ INCL#    INCREASE THE SIZE OF A FIELD TO THE LEFT
_ INCR#    INCREASE THE SIZE OF A FIELD TO THE RIGHT
_ KEEP     NO CHANGE TO THIS FIELD
_ KEEPFLAG NO CHANGE TO THIS FIELD (FLAG)
_ LEX2     EXPAND FIELD TO THE LEFT BY TWO BYTES
_ LEX2B    EXPAND FIELD TO THE LEFT BY TWO BYTES, MAKE USAGE COMP
_ LEX2D    EXPAND FIELD TO THE LEFT BY TWO BYTES, MAKE USAGE DISPLAY
```

Figure 78 • ASG-AutoChange Strategy Directory Screen

```
  Help
--------------------------------------------------------------------------------
                    ASG-AutoChange Strategy Directory
Command ===> _____________________________________________ Scroll ===> CSR

_  Immediately propagate strategy

Action:     S=Select     C=Copy     E=Export     M=Modify      R=Rename

    Name   Description                                              1 of 39
- -------- ------------------------------------------------------------
_ COMEBACK ANOTHER TEST
_ DDDYY    EXPAND DDDYY DATE TO DDDYYYY FORMAT
_ DDMMYY   EXPAND DDMMYY DATE TO DDMMYYYY FORMAT
_ DECL#    REDUCE THE LENGTH OF A FIELD FROM THE LEFT
_ DECR#    REDUCE THE LENGTH OF A FIELD FROM THE RIGHT
_ FDDMMYY  EXPAND DD/MM/YY DATE TO DD/MM/YYYY FORMAT
_ FMMDDYY  EXPAND MM/DD/YY DATE TO MM/DD/YYYY FORMAT
_ FYYMMDD  EXPAND YYMMDD DATE TO YYYY/MM/DD FORMAT
_ INCL#    INCREASE THE SIZE OF A FIELD TO THE LEFT
_ INCR#    INCREASE THE SIZE OF A FIELD TO THE RIGHT
_ KEEP     NO CHANGE TO THIS FIELD
_ KEEPFLAG NO CHANGE TO THIS FIELD (FLAG)
_ LEX2     EXPAND FIELD TO THE LEFT BY TWO BYTES
```

3 Type `M` next to the strategy name. Press Enter. The Modify AutoChange Strategy screen displays (see Figure 79).

Figure 79 • Modify ASG-AutoChange Strategy Screen

```
  File  Help
--------------------------------------------------------------------------------
                      Modify ASG-AutoChange Strategy
Command ===> _                                              Scroll ===> CSR


Name . . . : DDMMYY
Logic Length Delta   2
Expansion  . . . . . R                        ('L'eft/'R'ight)
Description  EXPAND DDMMYY DATE TO DDMMYYYY FORMAT


         M=Modify          D=Delete

  Allowable Picture   Usage      New Picture     NwUsage Br Rule
- ------------------ ------- ------------------ ------- --------
  X(6)               DISP    X(8)                       DDMMYY
  9(6)               DISP    9(8)                       DDMMYY
_ 9(6)               COMP-9  9(8)                       DDMMYYP
_ 9(6)               COMP    9(8)                       DDMMYYB
******************************** BOTTOM OF DATA ********************************
```

4 Review or modify the strategy as needed.

5 Press PF3 to save and exit.

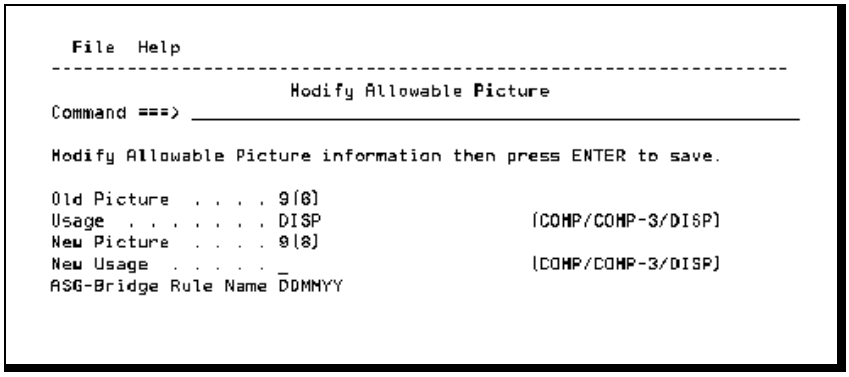
To modify an allowable picture

1 Select View ▸ Strategy Directory and press Enter. The View - ASG-AutoChange Strategy Directory screen displays (see Figure 78 on page 105).

2 Type `M` next to the strategy you want to modify and press Enter. The Modify ASG-AutoChange Strategy screen displays (see Figure 79 on page 105).

3 Type `M` next to the allowable picture you want to modify and press Enter. The Modify Allowable Picture pop-up displays (see Figure 80).

Figure 80 • Modify Allowable Picture Pop-up



4 Make the necessary changes and press Enter to save and return to the Modify ASG-AutoChange Strategy screen.

Or

Press PF3 to exit without saving.

To delete an allowable picture

1 Select View ▸ Strategy Directory and press Enter. The View - ASG-AutoChange Strategy Directory screen displays (see Figure 78 on page 105).

2 Type M next to the strategy you want to modify and press Enter. The Modify ASG-AutoChange Strategy screen displays (see Figure 81).

Figure 81 • Modify ASG-AutoChange Strategy Screen (Delete action)

```
  File  Help
--------------------------------------------------------------------------------
                        Modify ASG-AutoChange Strategy
Command ===> _____________________________________________ Scroll ===> CSR


Name . . . : DDMMYY
Logic Length Delta   2
Expansion  . . . . . R                      ('L'eft/'R'ight)
Description  EXPAND DDMMYY DATE TO DDMMYYYY FORMAT


         M=Modify          D=Delete

  Allowable Picture   Usage      New Picture    NwUsage Br Rule
- ------------------ ------- ------------------ ------- --------
_ X(6)               DISP    X(8)                       DDMMYY
_ 9(6)               DISP    9(8)                       DDMMYY
_ 9(6)               COMP    9(8)                       DDMMYYB
******************************** BOTTOM OF DATA ********************************
```

3 Type D next to the picture you want to delete and press Enter.

4 Press Enter to save and return to the Modify ASG-AutoChange Strategy screen.

Or

Press PF3 to exit without saving.

Viewing or Modifying Inline Strategies

You can view and modify Inline strategies on the View - Inline Strategy screen or the Inline Strategy Directory screen.

To view or to modify Inline strategies

1 Select View ▸ Inline Directory and press Enter. The View - Inline Strategy screen displays (see Figure 82 on page 108).

Or

Type I to select a data item and press Enter. The ASG-AutoChange Directory screen displays (see Figure 83 on page 108).

Figure 82 • View - Inline Strategy Screen

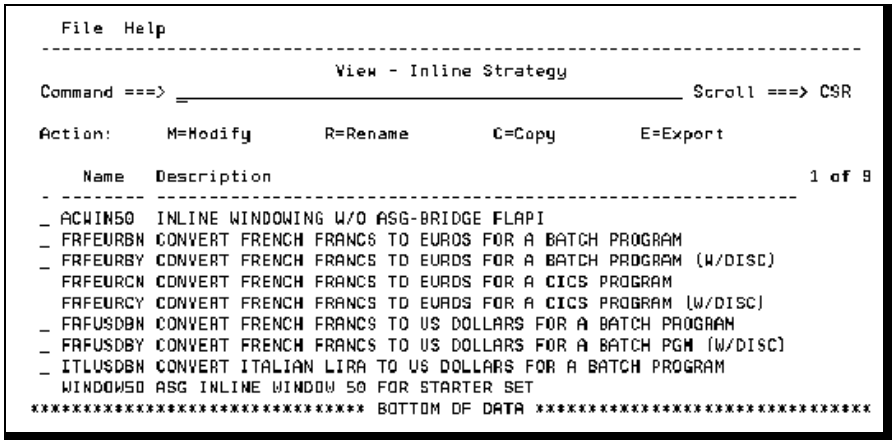
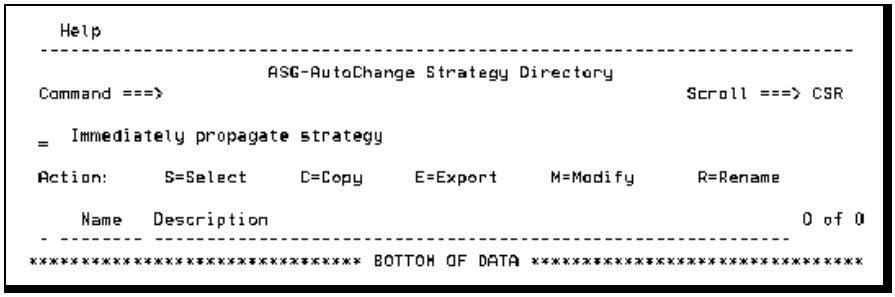


Figure 83 • ASG-AutoChange Strategy Directory Screen

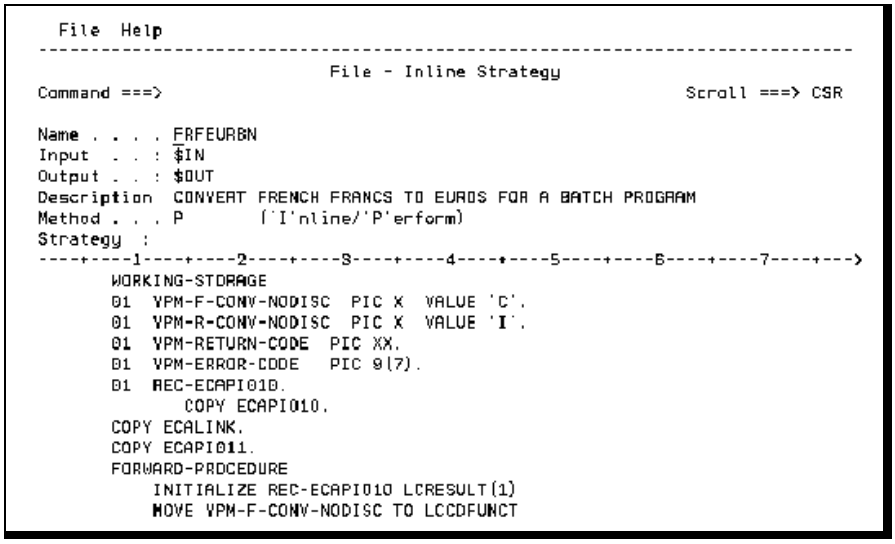


2 Type `M` to the left of the strategy you want to modify or to view and press Enter. The File - Inline Strategy screen displays (see Figure 84 on page 109).

Note:

You cannot modify the Name field from this screen.

Figure 84 • File - Inline Strategy Screen

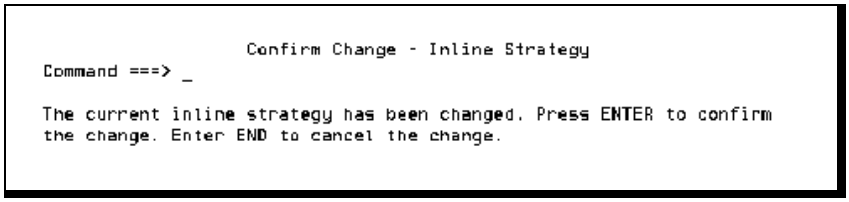


3 Select File ▸ Create/Edit Source and press Enter to modify the strategy, as needed.

4 Press PF3 to save changes and return to the previous screen.

5 Press PF3 to exit and save changes. The Confirm Change - Inline Strategy pop-up displays (see Figure 85).

Figure 85 • Confirm Change - Inline Strategy Message Pop-up



6 Press Enter to save changes.

Or

Press End to cancel without saving.

To copy strategies or Inline strategies

1 Select View ▸ Strategy Directory and press Enter to access the AutoChange Strategy Directory screen.

Or

Select View ▸ Inline Directory and press Enter to access the View - Inline Strategy screen.

2 Type C to the left of the strategy you want to copy and press Enter. The Copy ASG-AutoChange Strategy pop-up (see Figure 86) or the Copy Inline Strategy pop-up displays (see Figure 87).

Figure 86 • Copy ASG-AutoChange Strategy Pop-up

```
                    Copy ASG-AutoChange Strategy
Command ===>

Enter a new strategy name, then press ENTER to confirm the Copy.
Enter END to cancel the Copy.

Current name : DDHMYY
New name . . . _______
```

Figure 87 • Copy Inline Strategy Pop-up

```
                         Copy Inline Strategy
Command ===>

Enter a new inline name, then press ENTER to confirm the Copy.
Enter END to cancel the Copy.

Current name : FRFEURBY
New name . . . _______
```

3 Type a new name. Press Enter to confirm and return to the previous screen.

To rename strategies or Inline strategies

1 Select View ▸ Strategy Directory and press Enter to access the View - ASG-AutoChange Strategy Directory screen.

Or

Select View ▸ Inline Directory and press Enter to access the View - Inline Strategy screen.

2 Type R next to the strategy name you want to rename and press Enter. The Rename ASG-AutoChange Strategy pop-up (see Figure 88) or the Rename Inline Strategy pop-up displays (see Figure 89).

Figure 88 • Rename AutoChange Strategy Pop-up

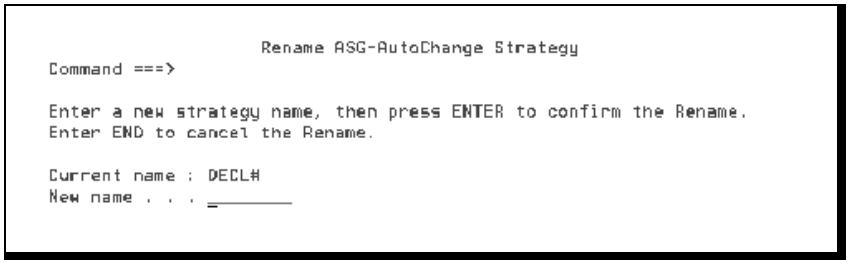
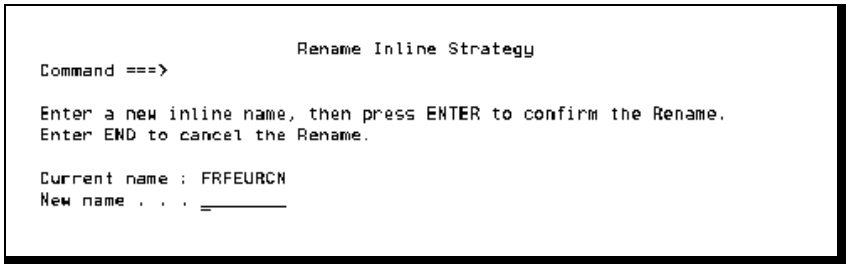


Figure 89 • Rename Inline Strategy Pop-up



3 Type the new strategy name or the new Inline strategy name. Press Enter to confirm the change.

4 Press PF3 to return to the previous screen.

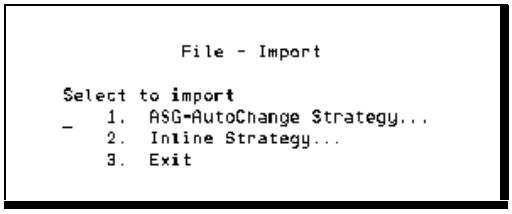
Importing and Exporting Strategies or Inline Strategies

You can import and export AutoChange and Inline strategies created in AutoChange or in other applications. See "Importing AutoChange Starter Set Strategies" on page 18 for dataset and member name information for importing starter-set strategies.

To import strategies

1 Select File ▸ Import from the AutoChange Primary screen and press Enter. The File-Import pop-up displays (see Figure 90).

Figure 90 • File - Import Pop-up



2 Select ASG-AutoChange Strategy and press Enter. The File - Import ASG-AutoChange Strategy pop-up displays (see Figure 91).

Or

Select Inline Strategy and press Enter. The File - Import ASG-AutoChange Inline Strategy pop-up displays (see Figure 92 on page 113).

Figure 91 • File - Import AutoChange Strategy Pop-up

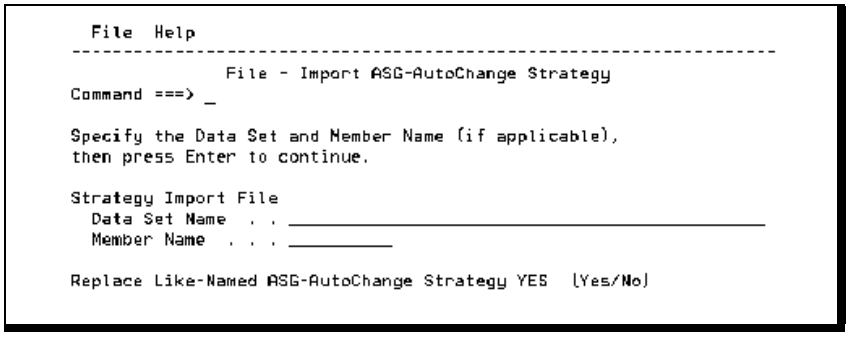
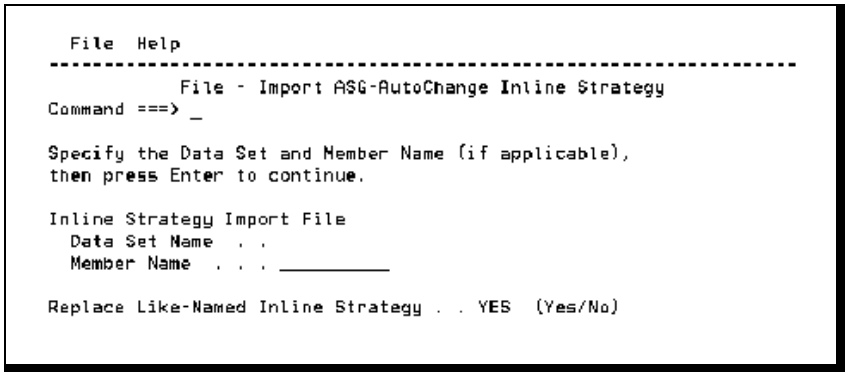


Figure 92 • File - Import AutoChange Inline Strategy Pop-up



3 Specify the dataset and member name information. Press Enter to import.

4 Press PF3 to exit.

To export AutoChange strategies or Inline strategies

You might need to export strategies to a different location for backup and recovery purposes, or to transfer the strategies for evaluation by ASG Customer Support.

1 Select View ▸ Strategy Directory from the AutoChange Primary screen and press Enter to access the AutoChange Strategy Directory screen.

Or

Select View ▸ Inline Directory from the AutoChange Primary screen and press Enter to access the View - Inline Strategy screen.

2 Type E to the left of the strategy you want to export and press Enter. The File - Export ASG-AutoChange Strategy (see Figure 93) or the File - Export ASG-AutoChange Inline Strategy pop-up displays (see Figure 94 on page 114).

Figure 93 • Export AutoChange Strategy Pop-up

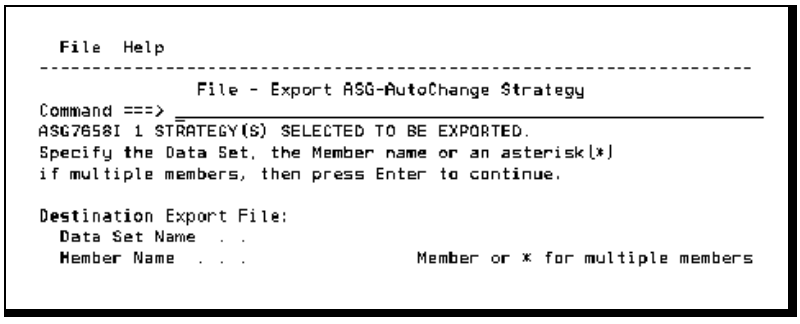


Figure 94 • File - Export ASG-AutoChange Inline Strategy Pop-up

3 If you have not already selected items for export, select File ▸ Select Export Strategy and press Enter from either Export Strategy screen. The Select - ASG-AutoChange Strategies pop-up or the Select - ASG-AutoChange Inline Strategies pop-up displays (see Figure 95 and Figure 96).

Figure 95 • Select - ASG-AutoChange Strategy Pop-up

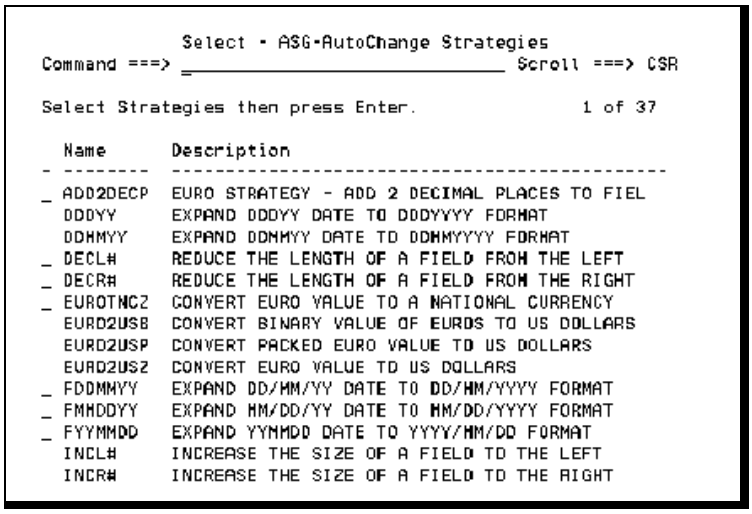
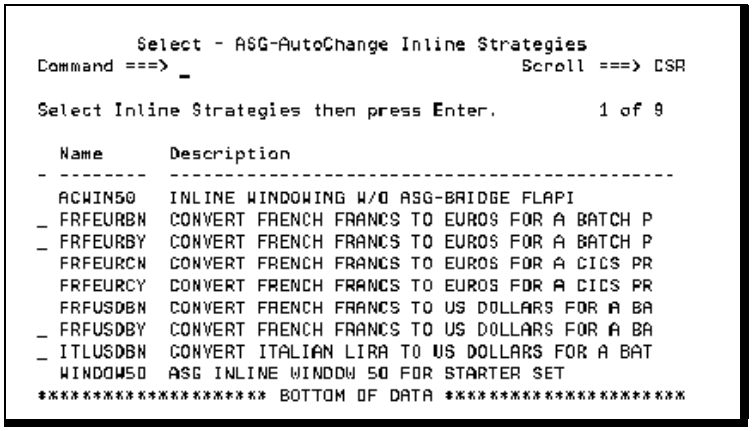


Figure 96 • Select - ASG-AutoChange Inline Strategy Pop-up



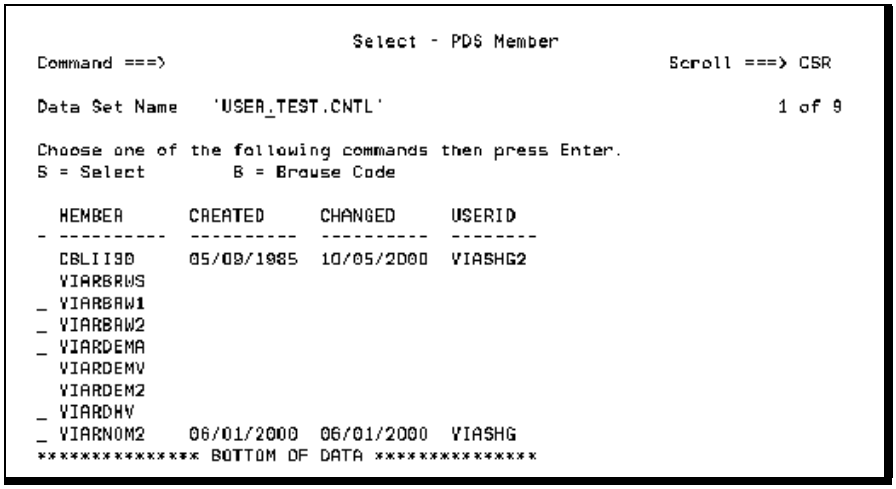
4 Type S to select the strategies you want to export. Press Enter.

5 Type the destination dataset (and member name, if applicable) and press Enter to begin the export.

Or

Select File ▸ Select Destination Member to select from a member list and press Enter. The Select - PDS Member pop-up displays (see Figure 97).

Figure 97 • Select - PDS Member Pop-up



6 Type S to select the member and press Enter to return.

You can use these methods to specify strategies to be exported:

- Use an asterisk (*) in the Member Name field to indicate multiple members. Each strategy is exported to a member of the same name as the strategy.
- Specify a member name to export all strategies to that member.
- Omit the member name to export all strategies to the dataset. It is written to as a sequential dataset.

7 Press PF3 to exit.

12 Creating Bridge Definitions for Bridge

This chapter describes how to use the Records to ASG-Bridge View pop-up and contains these sections:

Overview

Bridge works with converted programs to bridge unconverted files. You can create Bridge Definitions in AutoChange and use a dynamic link to Bridge to perform other bridging tasks, such as typing records or generating Bridge Routines. You can then return to AutoChange to finish conversion tasks.

AutoChange automatically inserts the Bridge initialization statement to enable bridging into programs when you apply conversion strategies.

Using the Records to Bridge View

Use the Bridge Record and Bridge definition information designated during the conversion project planning phase to send Bridge Definitions to Bridge. Then, generate a Bridge routine from within Bridge to use with the program you are converting with AutoChange.

The Records to ASG-Bridge View pop-up lists all of the Bridge Records in the conversion set and provides information about the records. From here, you can specify the sort criteria that displays screen information in different sequences, view record layout information, access the Plan Strategies screen, and generate AutoChange reports.

To access the Records to ASG-Bridge View pop-up

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

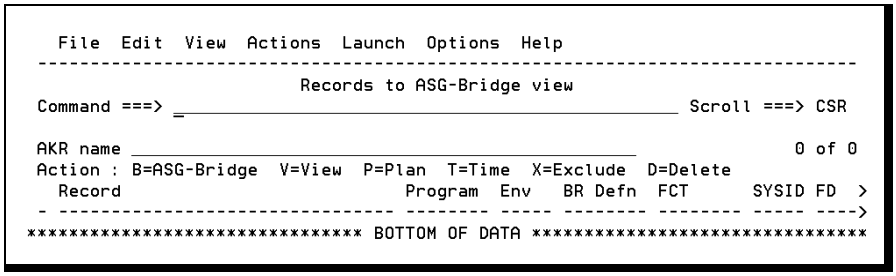
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Records to Bridge and press Enter. The Records to ASG-Bridge View pop-up displays (see Figure 98). Scroll right to view more information.

Figure 98 • Records to ASG-Bridge View Pop-up



Viewing Options

This table describes the View pull-down and the screen actions that control how information displays on the screen. Use the scroll right function to view the information in fields to the right of the viewing area.

To...	Do this...
Specify records to appear on screen	Select View ▸ Include and press Enter. The Include in View pop-up displays (see Figure 99). Select bridged, unbridged, or both and press Enter. The Records to ASG-Bridge View pop-up displays showing the specified records.
Specify sort criteria	Select View ▸ Sort and press Enter. The Sort Selection pop-up displays (see Figure 100 on page 120). Designate the options you want and press Enter. The Records to ASG-Bridge View pop-up returns displaying the information in the order you specified.
Exclude specified records from list	Type X to select the records to be excluded and press Enter. The records are removed from the screen.
Reset screen to view all records	Select View ▸ Reset and press Enter.The Records to ASG-Bridge View pop-up returns showing all of the records.
Show time records are planned and bridged	Type T and press Enter to select the records to view plan and bridge time. The Records to ASG-Bridge View pop-up displays showing the plan and bridge time for the selected records on the far right of the screen.

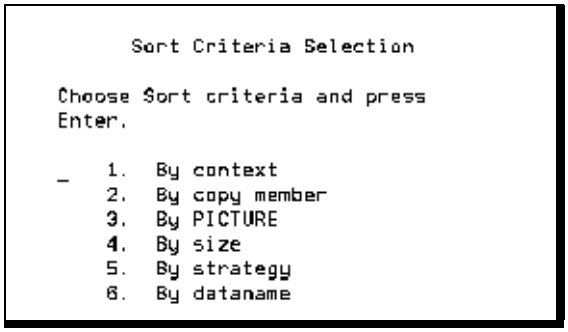
Figure 99 • Include in View Pop-up (Records to Bridge View)

```
                Include in View
Command ===> ____________________________________

Select items to be included in the view; then
press Enter.

_  Bridged records
_  Unbridged records
```

Figure 100 • Sort Criteria Selection Pop-up



Viewing Record Layout or Accessing Plan Information

View the applied layout structure or the Bridge Records strategy plan listed on the Records to ASG-Bridge View pop-up.

To view Bridge Record layout information

1 Type `V` and press Enter to select a Bridge Record. The Bridge Record Layout screen displays showing the layout of the selected record.

2 Press PF3 to return to the Records to ASG-Bridge view pop-up.

To view Bridge Record Plan information

1 Type `P` and press Enter to select a Bridge Record. The Plan Strategies screen displays showing the program where the selected Bridge Record resides.

2 Review or edit conversion strategies. When you save or cancel any changes, the system returns to the Records to ASG-Bridge view screen.

Creating and Sending Bridge Definitions to Bridge

You can create and send Bridge Definitions and Bridge Record layouts to a specified Bridge AKR. AutoChange lets you dynamically access Bridge to refine Bridge Definitions and type records and return to AutoChange to continue conversion tasks.

Note:

If you create a Bridge Definition using a name that already exists, you receive a message asking you to verify that you want to replace the existing definition.

You must complete the Bridge initialization information for the designated Bridge Records before you can create the Bridge Definitions. The message `Not ready to Bridge` displays if information is missing. See "Designating a Bridge Record" on page 90 for information on Bridge initialization.

To designate a Bridge AKR

1 Access the Records to ASG-Bridge View pop-up (see "To access the Records to ASG-Bridge View pop-up" on page 118).

2 Type the name of the AKR where Bridge Definitions are to be sent and press Enter.

Or

Select View ▸ AKR List and press Enter. The ASG-Bridge AKR List pop-up displays (see Figure 101).

Figure 101 • Bridge AKR List Pop-up

```
                ASG-Bridge AKR list
Command ===> _____________________________________________

  ASG-Bridge AKRs                          1 of 8
- ----------------------------------
_ VIAUSR.TEST31.AKR
_ VIAUSR.AKR
_ VIAUSR.BRIDGE30.MGTAKR
_ VIAUSR.BRIDGE31.MGTAKR
_ VIAUSR.BR31L000.MGTAKR
_ VIAUSR.APP30.AKR
_ VIAUSR.DEVL.AKR
_ VIAUSR.TESTBRBC.AKR
**************** BOTTOM OF DATA ******************
```

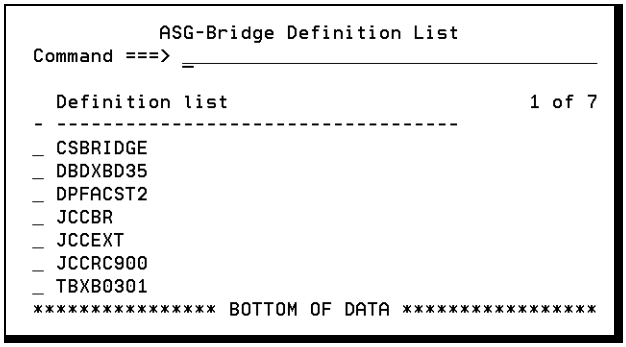
3 Select the AKR where Bridge Definitions are to be sent and press Enter. The AKR name displays in the AKR name field.

To view Bridge Definitions in the specified Bridge AKR

1 Access the Records to ASG-Bridge view pop-up (see "To access the Records to ASG-Bridge View pop-up" on page 118).

2 Select View ▸ Definition List and press Enter. The ASG-Bridge Definition List pop-up displays (see Figure 102).

Figure 102 • The ASG-Bridge Definition List Pop-up



3 Press PF3 to return to the Records to ASG-Bridge View pop-up.

To create and send Bridge Definitions and record layouts to Bridge

1 Select File ▸ Open Conversion Set from the AutoChange Primary screen.

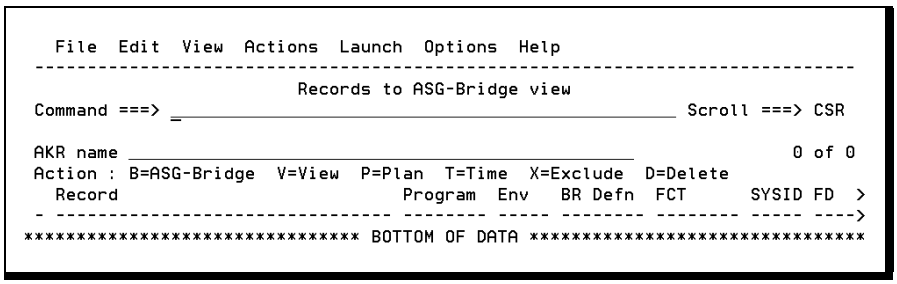
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select View ▸ Records and press Enter. The Records to ASG-Bridge View pop-up displays (see Figure 103). Scroll right to view more information.

Figure 103 • Records to ASG-Bridge View Pop-up



3 Type `B` to select a record to create a Bridge Definition to send to Bridge along with that record layout and press Enter. The Confirm ASG-Bridge Definition Replacement pop-up displays.

4 Select an option to handle Bridge Definitions if the specified name exists in the Bridge AKR and press Enter. The Records to ASG-Bridge View pop-up displays with the BR Defn column activated. If the Bridge Definition name is highlighted, it already exists and can be changed. If a Bridge Definition name is not specified, type a name.

5 Press Enter to create and send the definition to Bridge, along with the record layout.

6 Press PF3 to return to the Conversion Set screen.

To delete a record to Bridge

1 Access the Records to ASG-Bridge View pop-up (see "To access the Records to ASG-Bridge View pop-up" on page 118).

2 Type `D` to select the records for deletion and press Enter. The Confirm Delete pop-up displays.

3 Confirm or cancel the deletion, then press Enter to return to the Records to ASG-Bridge View pop-up.

Accessing Bridge

To refine Bridge Definitions and type records

1 Access the Records to ASG-Bridge View pop-up (see "To access the Records to ASG-Bridge View pop-up" on page 118).

2 Select Launch ▸ Bridge and press Enter. The Bridge Primary screen displays.

3 Perform Bridge tasks and press PF3 from the Bridge Primary screen to return to the Records to ASG-Bridge View screen. See the *ASG-Bridge User's Guide* for specific Bridge procedures.

13 Promoting Converted Programs and Copybooks

You can promote the programs and copybooks to the original library or to a user-specified target library after you apply conversion strategies to programs and copybooks.

To promote converted programs and copybooks

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Type ○ to select the programs or copybooks to promote and press Enter. The Promote Source Member pop-up displays.

Note:
If you select multiple items to promote, the items appear on the screen in succession as the previous item is promoted.

3 Press Enter to restore the selected program or copybook to the original location.

Or

Specify a different library in the Target Library field and press Enter. When all items are promoted the Conversion Set screen displays and shows the promotion dates.

Note:
You cannot promote IDMS records.

If your source originated from Endevor, the original library name displays as a five node name in this format: *Environment.System.Subsystem.Type.Stage*. You can enter another five node name for the source in the target library field or press Enter to accept the original name.

14 AutoChange Reports

This chapter describes the two reports that show the conversion set status and the impacted data item information and contains these sections:

You can generate two reports to show the conversion set status and the impacted data item information. Samples of each report are shown in Figure 104 on page 128, and Figure 105 on page 129.

Conversion Set Status Report

Figure 104 • Conversion Set Status Report

```
ASG-AUTOCHANGE R7.0 LVL000              Conversion Set Status report                              CSS
                                           Conversion Set - TESTSET
                                                                                          Page:        1
 Date: XX-JUN-XXXX
 Time:    10:17:05
 Programs in Conversion Set                                                               By:      ASGUSR

================================================================================================================
==
                                Stage      Analyze    Plan       Apply      Promote    Original Source Library
Name     Type  Item Cnt Assigned Date/Time  Date/Time  Date/Time  Date/Time  Date/Time  Staged Source Library
----     ----  -------- -------- ---------- ---------  ---------  ---------  ---------  ----------------------
VIAFPPG1   PGM    26      26   11/10/2002 11/10/2002 11/11/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.SOURCE
                                 07:48:00   08:26:47   14:44:05   15:14:45   16:17:00  ASGUSR.DJHTEST.B0000001
VIAFPCP1   CPY    15      15   11/04/2002    --    11/11/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.COPYLIB
                                 16:39:00     --      14:44:05   14:45:39   16:23:00  ASGUSR.FASTPATH.COPYLIB

VIAFPPG2   PGM    24      24   11/04/2002 11/05/2002 11/10/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.SOURCE
                                 16:38:54   16:23:08   14:04:43   15:04:05   16:17:00  ASGUSR.FASTPATH.SOURCE
VIAFPCP1   CPY    15      15   11/04/2002    --    11/11/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.COPYLIB
                                 16:39:00     --      14:44:05   14:45:39   16:23:00  ASGUSR.FASTPATH.COPYLIB

VIAFPPG3   PGM    37      37   11/04/2002 11/06/2002 11/10/2002 11/11/2000 11/11/2002 ASGUSR.FASTPATH.SOURCE
                                 16:38:57   15:35:39   08:24:13   14:49:15   16:17:00 ASGUSR.FASTPATH.SOURCE
VIAFPCP1   CPY    15      15   11/04/2002    --    11/11/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.COPYLIB
                                 16:39:00     --      14:44:05   14:45:39   16:23:00  ASGUSR.FASTPATH.COPYLIB
VIAFPCP2   CPY    19      19   11/04/2002    --    11/10/2002 11/11/2002 11/11/2002 ASGUSR.FASTPATH.COPYLIB
                                 16:39:01     --      08:30:26   14:46:02   16:14:00  ASGUSR.FASTPATH.COPYLIB
```

Data Item Strategy Report

Figure 105 • Data Item Strategy Report

```
ASG-AUTOCHANGE R7.0 LVL000            Data Item Strategies report                                  DIS
                                       Conversion Set - TESTSET
                                                                                      Page:            1
                                                                                      Date: XX-JUN-XXXX
 PROGRAM : VIAFPPG1                                                                   Time:     09:47:56
 Uses 1     Copybook(s)                                                                 By:       ASGUSR
====================================================================================================

 Data Item Name                  Lvl Copy Name  Strategy  Bridged   Data Item Qualifier
 ------------------------------ --- ---------- -----------------------------------------------------------
-
 END-OF-COLS                       5            INSERT             OF QRY-INP-FIRST-BYTES OF WS-QRY-INP-R
 WS-QRY-INP-R                      1            KEEP                (None)
 WS-QRY-INP                        1            KEEP      03/18/1585  (None)
 QRY-INP-GRP-CRT-DT                5            KEEP                (None)
 QRY-INP-GRP-CHG-DT-4              5            KEEP                (None)
 QRY-INP-GRP-CHG-DT-3              5            KEEP                (None)
 QRY-INP-GRP-CHG-DT-2              5            KEEP                (None)
 QRY-INP-GRP-CHG-DT-1              5            KEEP                (None)
 CRT-YY                           10            KEEP                (None)
 CHG-YY-4                         10            YY                  (None)
 CHG-YY-3                         10            YY                  (None)
 CHG-YY-2                         10            YY                  (None)
 CHG-YY-1                         10            YY                  (None)
 WS-OUTLINE-OUTP                   1 VIAFPCP1   KEEP      03/18/1585  (None)
 OTL-OUTP-CRT-DT                   5 VIAFPCP1   KEEP                (None)
 OTL-OUTP-CHG-DT-4                 5 VIAFPCP1   KEEP                (None)
 OTL-OUTP-CHG-DT-3                 5 VIAFPCP1   KEEP                (None)
 OTL-OUTP-CHG-DT-2                 5 VIAFPCP1   KEEP                (None)
 OTL-OUTP-CHG-DT-1                 5 VIAFPCP1   KEEP                (None)
 OTL-CRT-YY                       10 VIAFPCP1   KEEP                (None)
 OTL-CHG-YY-1                     10 VIAFPCP1   KEEP                (None)
```

Generating Conversion Set Reports

To generate conversion set reports

1 Select File ▸ Open a Conversion Set from the AutoChange Primary screen.

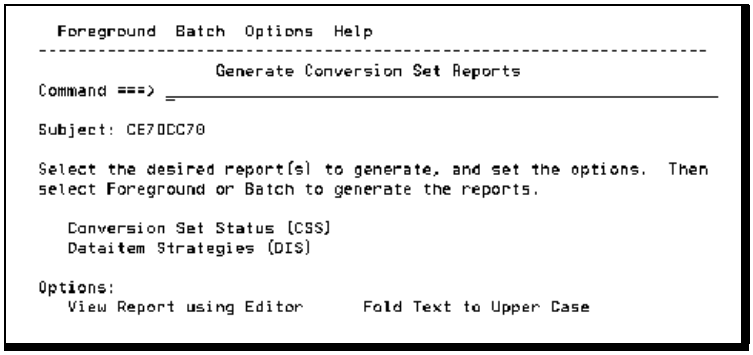
Or

If a conversion set is already open, Select View ▸ Conversion Set.

Press Enter. The Conversion Set screen displays.

2 Select Actions ▸ Generate Reports and press Enter. The Generate Conversion Set Reports pop-up displays (see Figure 106).

Figure 106 • Generate Conversion Set Reports Pop-up



3 Select the reports to generate and designate options.

4 Choose one of these methods to generate the reports:

To…	Do this…
Generate and view the report online.	Select Foreground ▸ Generate and view and press Enter.
Generate the report as a batch job.	Select Batch ▸ Submit job and press Enter.
Edit the CNTL library member before submitting the batch job to generate reports.	Select Batch ▸ Edit job and press Enter.

Note:

To edit batch execution information, select Options ▸ Batch execution and press Enter. Edit the information as needed and press PF3 to return to the Generate Conversion Set Reports pop-up.

5 Specify report options on one or both of the pop-ups described in this table:

If you selected…	This pop-up displays…	Specify…
Conversion Set Status (Figure 107)	Conversion Set Status Report	Items to include in report: programs, copybooks, program/copybook cross-reference.
Data Item Strategies (Figure 108)	Data Item Strategies Report	Programs and copybooks to include in report. Leave blank to include all.

Figure 107 • Conversion Set Status Report Pop-up

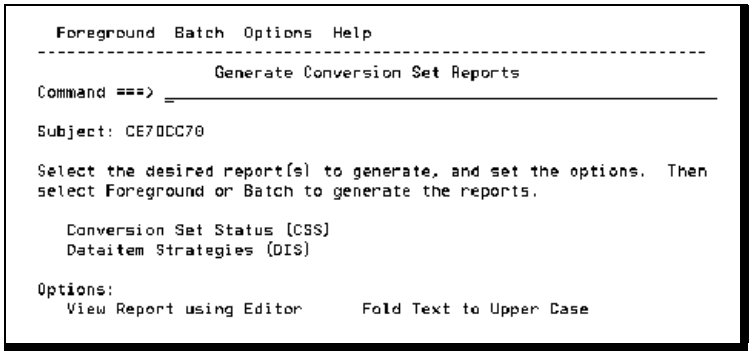
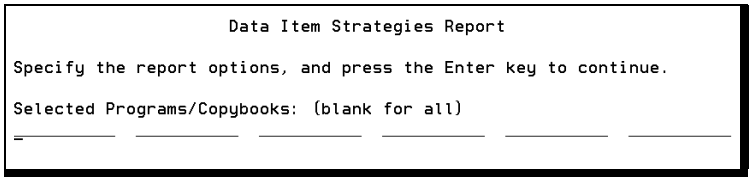


Figure 108 • Data Item Strategies Report Pop-up



6 Press Enter as you complete each pop-up. One of these will occur:

- If you generate and view the report, the report displays.
- If you generate as a batch job, the job is submitted and you return to the Generate Conversion Set Reports pop-up.
- If you edit the job before you submit it, the Edit screen displays. Make edits and type `TSO SUBMIT` on the command line and press Enter. The job is submitted and you return to the Generate Conversion Set Reports pop-up.

7 Press PF3 to return to the Conversion Set screen.

Viewing and Printing Reports

To view existing reports

1. Access the Generate Conversion Set Reports pop-up (see "To generate conversion set reports" on page 130).
2. Select reports to be viewed and press Enter.
3. Select Foreground ▸ View existing and press Enter.

To print existing reports

1. Access the Generate Conversion Set Reports pop-up (see "To generate conversion set reports" on page 130).
2. Select reports to be printed and press Enter.
3. Select Foreground ▸ Print existing and press Enter.

Glossary

acknowledged conflict
In AutoChange, a designation for a conflict arising from application of strategies that needs further research.

allowable picture
The picture-clause definition of data items to which a strategy can be applied. When you add an allowable picture to a strategy, you specifically define the valid fields for the strategy.

analyze
A batch process to gather analysis information, including organization, data relationships, and execution paths. This process stores the analysis information in the specified host AKR.

application
Any group of programs that you want to analyze or to view as a whole. Usually a group of programs that work together to perform related tasks.

application definition
The program source, load module, JCL, CICS, DB2, IDMS, and IMS components and attributes associated with an application.

Application Knowledge Repository (AKR)
A BDAM or a VSAM file that contains all analysis information produced by ESW program analysis tools. Multiple AKRs can be defined. Utilities are included to allocate and maintain the AKR.

apply
In AutoChange, action taken to enact a conversion strategy that has been assigned.

AutoChange strategy
An ESW method for modifying the length and/or type of a data item by changing the field description for the affected data item in the program's data division.

Bridge Definition
An object used to store information about a file and its bridging requirements. One Bridge Definition is necessary for each file requiring bridging.

Bridge Record
Designation given to a data item in a conversion set that triggers a Bridge initialization CALL statement when the conversion strategy is applied.

Bridge Routine
Executable code for a bridging process to convert database records read and written by an application program.

Bridge Rule
A way of identifying a Bridge Macro that performs a conversion and its associated parameters.

bridging
A conversion strategy that permits you to convert programs individually or in groups without requiring file conversions. Converted programs process unconverted files by converting the file records as they are being read and written.

command input line
The field on ESW product screens where commands may be entered, indicated by ===>.

Common User Access
A user interface standard that provides ease of use and access. ESW products feature CUA screens, action bars, pull-downs, and pop-ups.

compatible strategy
Strategies within AutoChange that specify similar change methods.

conversion project
A series of planned changes to programs based on information from program analysis.

conversion set
In AutoChange, a group of components created to convert selected programs and copybooks. The set includes an impacted data item list, an AKR, and a set of staging and backup libraries.

conversion strategy
In AutoChange, a method for modifying a data item field. A conversion strategy is assigned to every data item in an imported data item list to specify how the item is to be converted.

copybook
A common piece of source code designed to be copied from a source library into many source programs.

CUA
See Common User Access.

data item list
In AutoChange, a listing of items affected by a proposed conversion. A conversion strategy must be assigned to each data item.

discrepancy
The difference between the original amount and the recalculated amount in a currency conversion when one currency is converted to another and then back again.

fixed array
An aggregate, having a fixed number of occurrences, that consists of data objects with identical attributes that can be uniquely referenced by subscripting.

impact analysis
Output of processes performed using Estimate or Alliance. These are used as the basis of processing by AutoChange.

impacted data items
In AutoChange, data items that the engineering process has identified as affected by a proposed conversion.

Inline strategies
Methods for implementing inline conversion code by changing procedural code where the affected data item is being referenced. An Inline strategy copies in code that you designate.

literal
In programming languages, a lexical unit that directly represents a value; for example, 8 represents the integer eight.

load library
A partitioned dataset that contains executable modules created from the linkage editor. The dataset name can be defined to the application definition.

logfile
A file allocated by ESW products and used for error messages and log commands.

logical length delta
In AutoChange, a number indicating the difference between current picture (PIC) sizes defined in COBOL code, and proposed conversion picture sizes. For example, if the picture clause listed PIC 9(6) and is now PIC 9(8), the logical length delta is 2.

member
An item in a partitioned dataset or a source manager such as Panvalet or Librarian.

misfiled item
In AutoChange, a data item residing in a source member other than the member specified in original analysis information from Estimate or Alliance. Misfiling can occur if the source is modified after the original Estimate or Alliance impact analysis.

picture
In COBOL, the picture clause defines the format of data, specifying the kinds of characters allowed and the field size. For example, PIC 9(8) specifies numeric data of a maximum of 8 digits.

program
Program source member name, the name specified in the IDENTIFICATION DIVISION of a COBOL program, or the CSECT name of a program that is not COBOL.

propagation levels
In AutoChange, the layers of synonyms created when MOVE statements are assigned to items. A propagation level is an integer that represents the number of levels a strategy should apply to.

propagation of strategy
In AutoChange, the process of copying a strategy assigned to a data item to all related data items (synonyms) in the conversion set.

propagation options
In AutoChange, alternatives for selecting the data items to which a strategy is to be copied.

pull-down
The list of actions that displays when a keyword is selected on the action bar. On a pull-down, actions followed by the ellipsis (...) display a pop-up when selected. Actions not followed by the ellipsis activate the associated function when selected. See also CUA.

record key
A field in the first block of a record in an indexed dataset used in storing and retrieving records in the dataset.

reverse conversion
Recalculating the original amount in a simple currency conversion using the converted amount, the conversion rate, and the conversion discrepancy.

rollback
In AutoChange, the process of removing changes applied to source code so that conversion strategies can be reassigned.

routine
A portion of a computer program consisting of a number of actions to be performed in sequential steps.

schema
The set of statements, expressed in a data definitions language, that completely describe the structure of a database.

segment
A portion of a computer program that can be executed as an entity without the entire computer program being maintained in main storage.

source manager
A system, such as Panvalet or Librarian, that manages files used by applications.

staging task
The part of the AutoChange process where the source code for programs to be converted is copied into staging and backup libraries.

strategy
In AutoChange, a conversion method for changing the field length of an impacted data item.

Task Manager
A facility of AutoChange that generates a sequential list of conversion tasks. The Task Manager automatically guides you through the critical tasks of a conversion project.

unfound copybook item
In AutoChange, a data item not found by any programs in the conversion set. If a copybook contains unfound items, they must be removed from the list of impacted data items.

Appendix A
AKR Management and Space Allocation

AKR Management

AutoChange provides access to AKR utilities that you can use to manage your AKR.

To access AKR utilities

1. Select File ▸ AKR Utilities from the AutoChange Primary screen and press Enter. The File - AKR Utility pop-up displays.
2. Follow the instructions on the screen to complete the task you want to perform.
3. Press PF1 for online help if you need more information.

Space Allocation

These are the Analyzer resource estimates you use to process COBOL programs and applications of various sizes (for the AKR estimates in this table, a record is equivalent to a block):

Source Lines	Virtual Memory Size	XA Memory Size	CPU Time MM:SS	AKR Records	VIAUT2 Cyls
1000	1060 KB	13600 KB	0:04	150	2
2000	1060 KB	13700 KB	0:10	300	3
5000	1060 KB	13800 KB	0:30	750	6
10000	1060 KB	14000 KB	1:00	1500	12
20000	1060 KB	16000 KB	2:00	3000	24
50000	1060 KB	18000 KB	5:00	6000	50

Note:

Programs with recursions or out-of-perform GO TO statements may take more resources than the table indicates.

Appendix B
Analyze Options

The analyze job uses many of the same options as the COBOL II compilers to control output format and describe COBOL options. Default options are established when AutoChange is installed. You can override the defaults by entering the desired options on the Analyze Submit pop-up. If you enter an invalid option, the analysis job ignores it. If you enter a valid option more than once, the last one is processed.

Options that accept program names as parameters, with the exception of PROGRAM, accept special characters to signify generic names. The asterisk (*) represents one or more characters. The question mark (?) represents a single character. For example:

Option	Description
DBA*	All programs beginning with DBA and ending with any other characters.
D?A*	All programs beginning with D followed by any character, followed by A, then followed by any other characters.
DBA???	All programs beginning with DBA and ending with any three characters.

Options Table

This table summarizes the analyze options. Abbreviations are shown in uppercase and meet compiler standards. The defaults indicated reflect the information on the installation tape. The Analyze Summary Report printed at the end of each analyze job lists the actual options in effect and the override options passed to the job.

Option	Description
BUF(*nnnnn*K) BUF=*nnnnn*K	Product dynamically allocates amount of main storage to buffers and internal tables. Use if an override is necessary. The minimum value is 20 KB, and the maximum is 20000 KB.
COBOLII COBOL370 COB2R3 COBMVSVM COBOS390 ENCOB31 NOCOBOLII	COBOLII and COB2R3 override LANGLVL option and process input program as COBOL II Release 3.0 or 3.1.
DB2LIB=*xxxxxx.xxxxx.xxx xxx (xxxxxx.xxxxx.xxxxxx* is DB2 load library dataset name)	Specifies load library used to invoke onsite DB2 preprocessor.
DB2PLAN=*xxxxxxxx*	Specifies ESW application plan created at installation by VIASBIND job. Use to override default plan name.

DYNcall
NODYNcall
	Specifies whether commands look up called programs using datanames in dynamically called programs. The default is DYNcall.
	
	If you specified NODYNCALL, analysis does not process dynamic, and information for them is not available to ESW product functions.
	
	For example, the analysis process for this code proceeds differently, depending on whether DYNCALL is specified:
	`77 MYPROG  PIC X(8)`
	`CALL MYPROG USING PARM1, PARM2`

Option	Description
	In this example, if DYNCALL is in effect, the analysis process assumes the program being called is MYPROG, regardless of data value MYPROG contains at runtime. The analysis process looks up the MYPROG analysis results in AKR to determine whether the PARM1 and PARM2 are used or are modified. If NODYNCALL is in effect for this example, the analysis process assumes that the program being called could be anything and treats the PARM1 and PARM2 as used and modified on the call statement. DYNCALL option is unrelated to COBOL compiler option DYNAM
fLAGW fLAGE	Specifies types of messages listed for analysis job: These are the valid types for Flag and Level: I Informational W Warning E Error S Severe U Unrecoverable Some informational messages are listed regardless of flag setting.
fLAG(*x*)	Indicates all messages of the specified level or above are listed.
Input(*x,x,…x*) Input=*x*	Lists CALLed programs containing INPUT statements. When commands that search for INPUT are issued, statements that CALL these programs are shown in command results. Specified programs are in addition to those specified at installation.
NOInput(*x,x,…x*) NOInput=*x*	Overrides installation default list of CALLed programs containing INPUT statements. Deletes specified programs from default list.
IO(*x,x…x*) IO=*x*	Lists CALLed programs containing INPUT and OUTPUT statements. When commands that search for INPUT and OUTPUT are issued, statements that CALL these programs are shown in command results. Specified programs are in addition to those specified at installation.

Option	Description
NOIO	Overrides installation default list of CALLed programs containing INPUT and OUTPUT statements. Deletes specified programs from default list.
LANGLVL(1 | 2)	Specifies whether to use the 1968 or 1974 American National Standard COBOL definitions when analyzing source elements with meanings that have changed. LANGLVL(1) indicates the 1968 standard is to be used. LANGLVL(2) indicates the 1974 standard (X3.23-1974) is to be used. The default is LANGLVL(2).
LineCNT=60	Specifies number of lines, 1 to 99, to print per page for source listing. The default value is 60.
MAIN	Used as override. EXIT PROGRAM statements in COBOL programs are treated as GOBACKS by analysis job because program is considered CALLed subprogram. If program is main program, MAIN option treats EXIT program as fallthrough.
MBRERCNT=4000	Specifies the maximum number of analysis errors, 1 to 4000, allowed per member during analysis before the analysis terminates processing for that member. The default is set at installation.
Output(*x,x,...x*) Output=*x*	Lists CALLed programs containing OUTPUT statements. When commands searching for OUTPUT are issued, statements that CALL these programs are shown in command results. Specified programs are in addition to those specified at installation.
NOOutput(*x,x,…x*) NOOutput=*x*	Overrides installation default list of CALLed programs containing OUTPUT statements. Specified programs are deleted from default list.
PROgram(*xxxxxxxxxx*) PGM=*xxxxxxxxxx*	Analyzed programs are stored in the AKR and identified by program name coded in the PROGRAM-ID statement. PROGRAM overrides name coded in the PROGRAM-ID statement. The specified name can be from one to ten characters long.

Option	Description
RECur NORECur	Specifies whether the recursion report should be included in Analyze Summary Report. If RECUR is specified and no recursion is found, a message is issued indicating no recursion detected. If RECUR is specified and recursion is found, a message is issued and recursive code is printed on report. The default is NORECUR.
RETurn(*x,x,...x*) RETurn=*x*	Overrides the installation list of programs or of entry points that do not return when CALLed. System defaults that are overridden by listing the desired programs or the entry points that return when CALLed.
NORETurn(*x,x,...x*) NORETurn=*x*	Lists additional programs or entry points that do not return when CALLed. When these programs are CALLed by the program being analyzed, they are treated as non-returning CALLs. Specified programs are in addition to system defaults for programs that do not return when CALLed.
SEQ NOSEQ	Specifies whether analysis job checks source module statement number sequence. Warning message is printed if statements are not in sequence. If SOURCE option is specified, flag (**) is placed between analysis job sequence numbers and source sequence numbers. The default is SEQ.
SOUrce NOSOUrce	Specifies whether source program is listed. Specify SOURCE for full program listing at analysis time. The default is NOSOURCE.
SpACE1 | 2 | 3	Specifies spacing for source listing generated when the SOURCE option is used. The default is single.
SQLID=*x* SQLID(*x,x,...x*) *x* is 8 character authorization ID or owner used by the analysis process.	Specifies the authorization ID or the owner used by the analysis process to qualify the unqualified table and to view references in program.

Option	Description
SUBSYS=*xxxx* *xxxx* is name of subsystem or location of DBMS.	Specifies the subsystem or the location designating DBMS that stores tables accessed by specified program. SUBSYS overrides name provided at installation.
XMEM	Performs an override. If program is extremely large (30,000 source lines) and memory is still insufficient after increasing region space, enter XMEM option. Although this results in more disk I/O and additional CPU usage, less memory is consumed.

Appendix C
SmartTest Batch Export

Exporting Impacted Data Items

AutoChange supplies the execution CNTL library member VIAMEXPJ to run a batch job to export impact datasets that SmartTest imports for analysis.

To export impact datasets from AutoChange

1. Make sure VIAMEXPJ has been copied from the AutoChange CNTL library to a TSO CNTL dataset.
2. Select VIAMEXPJ from the TSO CNTL dataset.
3. Review the PROC parameters and modify as necessary.
4. Submit VIAMEXPJ.

Note:

For more information, see the *ASG-SmartTest User's Guide*.

Appendix D
Starter Set Strategies

AutoChange Strategies for Year Conversions

These are the AutoChange strategies for year conversions:

Strategy Name	Description	Associated Bridge Rule	Compatible Strategies
NULL	No strategy assigned	--	--
KEEP	No change to this field	--	--
LEX2	Expand field to the left by 2 bytes	--	LEX2B LEX2D LEX2P
REX2	Expand field to the right by 2 bytes	--	REX2B REX2D REX2P
INCR#	Increase the size of a field by a specified amount	--	--
DECR#	Reduce the length of a field by a specified amount	--	--
KEEPFLAG	No change to this field, but flag the field	--	--
YY	Expand YY date to YYYY format	YY YYB	--
YYDDD	Expand YYDDD date to YYYYDDD format	YYDDD YYDDDB	

Strategy Name	Description	Associated Bridge Rule	Compatible Strategies
YYMM	Expand YYMM date to YYYYMM format	YYMM YYMMP YYMMBH YYMMBF	
YYMMDD	Expand YYMMDD date to YYYYMMDD format	YYMMDD YYMMDDP YYMMDDB	
MMYY	Expand MMYY date to MMYYYY format	MMYY MMYYP MMYYBH MMYYBF	
DDDYY	Expand DDDYY date to DDDYYYY format	DDDYY DDDYYP DDDYYB	
DDMMYY	Expand DDMMYY date to DDMMYYYY format	DDMMYY DDMMYYP DDMMYYB	
FYYMMDD	Expand YY/MM/DD date to YYYY/MM/DD format	FYYMMDD	
FMMDDYY	Expand MM/DD/YY date to MM/DD/YYYY format	FMMDDYY	
FDDMMYY	Expand DD/MM/YY date to DD/MM/YYYY format	FDDMMYY	
MMDDYY	Expand MMDDYY date to MMDDYYYY format	MMDDYY MMDDYYB MMDDYYP	
LEX2B	Expand field to the left by 2 bytes, make usage computational	--	LEX2 LEX2D LEX2P
LEX2D	Expand field to the left by 2 bytes, make usage display	--	LEX2 LEX2B LEX2P
LEX2P	Expand field to the left by 2 bytes, make usage packed computational	--	LEX2 LEX2B LEX2D

Strategy Name	Description	Associated Bridge Rule	Compatible Strategies
REX2B	Expand field to the right by 2 bytes, make usage computational	--	REX2 REX2D REX2P
REX2D	Expand field to the right by 2 bytes, make usage display	--	REX2 REX2B REX2P
REX2P	Expand field to the right by 2 bytes, make usage packed computational	--	REX2 REX2B REX2D

Inline Strategies for Year Conversions

This table contains the Inline strategies for year conversions:

Strategy name	Description
ACWIN50	Provides an example of using the module VIAACWIN to convert different types of dates (YY to YYYY, MMDDYY to MMDDYYYY, etc.).
WINDOW50	Provides an example of using the module VIAMCONV to convert a 6-digit date to an 8-digit date.

Note:

Documentation for additional Inline starter set strategies is included in the starter set text file.

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